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THE BOSTON WAY

PLANS *for the* DEVELOPMENT
of the INDIVIDUAL CHILD

Compiled and revised by the
SPECIAL CLASS TEACHERS
of Boston

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By THE SPECIAL CLASS TEACHERS' CLUB

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FOREWORD.

The supreme need of one who would teach or train a little child is the power to put oneself in his place—to go as far as the actual point of meeting with his actual need. What avails it that the teacher is strong, learned, skilled, if she cannot link her strength to her pupil's weakness, her knowledge to his ignorance, her skill to his lack of skill?

This book is the united work of the Special Class teachers of Boston, an outline of their united experience, and is sent out in the hope that it may aid teachers and mothers everywhere, when facing a child's need, to "come where he is."

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SENSE TRAINING.

"The senses are the avenues to the brain," therefore we must arouse the brain through the senses. Through sense training the child becomes more alert, and his attention and interest are quickened. The more backward the child, the more striking should be the sensations. If very undeveloped, flash a large red cloth in front of him; let him hear a loud noise; smell a strong odor; taste a strong flavor. Naming the sensation is not necessary at first. It is enough that his brain has recognized it, and he may be led through simple to more difficult discriminations, his faculties thus being brought, through special sense training, to their greatest ability.

1. SIGHT TRAINING.

a. *Color Discrimination.*

Let the child sort large pieces of red and yellow cloth, or other materials, gradually adding other colors and smaller pieces, until he can sort all six colors of small squares, pegs, pieces of cloth, worsted, or paper. Then add tints and shades.

Have boxes divided into eight compartments, the base of each painted a different color, using the six standard colors, and black and white. Have small pieces of corresponding colors, and let the child place them in the right compartments.

"The Embossing Company's Color Cubes" (faces different colors). Let the child turn all the blocks so that the yellow, or any given color, will be on top. The teacher forms a design, using two colors; later more than two. The child copies. Let him copy designs shown on the cover of the box.

Show a large piece of cloth or paper of a given color. Tell a child to run lightly around the room and see if he can touch five objects of that same color.

Have three children stand in front of the class, and place on the head of each a cap of colored paper. The other children observe for a moment, then cover their eyes. Teacher calls on some one to name each child and the color of his cap.

Place a row of pupils in the front of the room. Give each one a colored worsted kindergarten ball. Children in seats look long and carefully. At a signal from the teacher the balls should be concealed while the pupils change places in the line. Select a pupil to name the color belonging to each child.

Place color boards in a row on the blackboard ledge. Let the teacher give the order, "Touch red, white, blue and yellow." The child chosen runs and touches the indicated colors, in order, as he finds them on the color boards.

Get large spools from a factory. Color with Lane's water color paints, and use.

"Shepherd and Sheep." Choose two shepherds. Select a number of

sheep for each one. At a given signal the sheep all gather in the front of the room. Each shepherd is to recognize his own sheep, and separate them from the sheep of the other shepherd. The one who succeeds in doing this first, wins.

Teach the ready recognition of autumn flowers and fruits. Arrange flowers or vegetables in a row on a table, and have them named from left to right and from right to left. Change the arrangement, and have them named. Have the children close their eyes. The teacher changes the arrangement, and has a child replace them as they were originally. Repeat this a number of times in order that the children may quickly detect any change made. Increase number of flowers and fruit as children grow in power.

Place a peach, pear and plum in a row on the table. Have them named from right to left, and from left to right. "Which is in the middle?" "Name the one at the right." "Name the one at the left." Change the position of the fruit, and question in a similar way. While the children close their eyes, the teacher changes the arrangement and calls upon a child to replace it. Vary the articles used.

Have several cards with squares, triangles and circles drawn in different order and colored. Give each child the forms, a box of paper, and a box of crayons. Show one of the cards to the class and let them reproduce it.

Teach the names of the leaves by hunting for the various kinds on walks and naming them as they are found.

b. *Form and Size Discrimination.*

Let the child sort large and solid forms, using two contrasting forms first, as cube and ball. Later add other solid forms: cylinder, cone and pyramid. Have two of each form, and let him place them in pairs. Increase the difficulty by adding color. Do the same with plane forms: circle, square, oblong, triangle, diamond, oval, egg-shape, pentagon, and hexagon.

Draw forms on the board, and let the child match cardboard forms to them. Increase the difficulty by having forms of different sizes.

Have a series of cubes graduating from one to ten inches. Let the child arrange them consecutively. Use plane forms in the same way.

Use the Seguin inset boards.

Have boxes divided into twenty-seven compartments. Have the letters of the alphabet pasted on the bottom of each in order. Give child a box of letters printed on cardboard, and let him place each one in its own compartment. These letters may also be used in building words.

Use picture puzzles.

Cut out pictures.

c. *Correct Observation.*

Have several objects on a table. Let the child look at them while the teacher counts three, turn away, and tell what he saw.

Let the child look at a picture, turn away, and tell what he saw.

Have the child describe, draw, and model objects seen.

Paste on cards six by nine inches, parquetry squares, circles, oblongs and triangles of different colors. Have different numbers of them, and in different positions on each card. Give the children the tablet forms to draw around. Hold one of the cards an instant before the class; put it away, and have the children color it from memory.

Have several objects on the table. Have a child touch one object, and another one, and so on, till nine or ten objects are touched in order by nine or ten children.

Two or three children stand at the front of the room. The other children look at them and close their eyes. Send those in front to their seats. The others open their eyes, and some child puts those who stood in front in the same places again.

Have three or four children hold mounted cards of animals. The others look at them and close their eyes. Have children in the front of the class turn the cards round, then some child must tell the names of the animals from left to right. Also tell where a certain animal was,—between what two animals.

Mounted pictures of trees, flowers, and fruits may be used in the same way.

Hold up a card with two or three colors. Children look closely, while teacher counts five. Remove card from sight. A chosen child names the colors in order from top to bottom, from bottom to top, etc.

Place three pupils in a row in front of room. Give a colored worsted kindergarten ball to each. Children at seats look closely while teacher counts to three or five. The children in the row place the balls behind them. A chosen child rises, and goes up to them, speaking to each one as follows: "Good morning, Mary Red," "Good morning, John Green," etc. If the color is correct, the child answers the salutation. Carry the game farther by adding new children to the line.

Place several colored balls in a row. While the child blinds his eyes, take one away; have him open his eyes and tell which one is gone. Take two or more, and have him tell which ones are gone.

Let one child leave the room, and have the children guess which one is gone.

Children leave the room. Place colored ball in plain sight. Let the children come in, and have each one take his seat when he has seen the ball.

d. *Aim.*

Ten pins, bean bag game, ring toss game, etc.

Take a hard rubber ball and place on X on floor at end of room. Make two circles at other end of room. Put five balls in each circle. Have sides. First one side rolls the ball, trying to hit the ball on X, then the other. Count three or four for side every time ball is hit.

2. AUDITORY TRAINING.

Have a box of different instruments, such as whistle, horn, bell, clappers, sleigh bells, automobile horn, rattle, and cow-bell. Begin with two sounds. Blindfold the child, and let him hear first one sound and then another. Gradually let him hear other sounds, and have him name them. Also point in the direction from which a sound comes.

Blow two blasts on a whistle, tap a bell twice, and sing four tones of the scale. At the close, select a child to imitate, being careful that number, sound, and order are carefully reproduced.

Play or sing a succession of tones. After each one have a child describe it, by saying "loud," "soft," "high," "low," etc.

Choose several pupils to play. Give one a bell, another a whistle, and

let a third walk across the floor. Children at seats should close their eyes, and listen to the simultaneous sounds. Select a child to tell how many and what sounds were heard.

Four chosen pupils stand in front. The other pupils lay their heads on their desks, and listen carefully. The ones in front walk, one at a time, in a direction indicated by the teacher. As soon as the footsteps cease, the listening pupils are allowed to tell the direction in which each child went. At first have some child tell the direction as soon as each pupil takes his turn. After it becomes easy to tell the direction through sound, begin with three children; have them walk, one after another, and call upon some pupil to tell the three directions in correct order.

The children close their eyes, and the teacher rolls a hard rubber ball, a soft rubber ball, or a wooden sphere. The children guess which one is rolled.

Send three children into the dressing-room, and have them sing in turn. Have the class guess who is singing.

Children at seats close their eyes. Choose one pupil who runs about the room and stops in a desired place, and asks, "Where am I?" One child is chosen to answer the question.

Use kindergarten game of "Bell Ringer," in the Reed Book.

One child is blindfolded, and another rings a bell. The blindfolded child points in the direction of the sound, and then chases the child, who continues to ring the bell, until caught.

"Hide the Thimble." One player is sent from the room. One of those left hides a thimble. When the object is hidden, the absent player is recalled and proceeds to hunt.

"Magic Music." A child hides his face, while another hides a ball. At a given signal the child hunts, while the teacher plays on the piano, softly when away from the ball, and louder when he draws nearer, the tone of the piano leading him to the ball.

"Bell the Cat" is played by having several blindfolded children chasing the child with the bell at the same time.

"Coo-Coo Game." One child hides, and says "Coo, coo," while another child follows the sound to find him.

Game of "Pussy." Put a block under a towel and call it a pussy. When one child is out of the room, another takes "Pussy" from under the towel, goes back to his seat, and mews like a cat. When the first child comes back and finds "Pussy" gone, he listens for her, and tries to find her by following the sound.

Have children listen to music, and do as it indicates, march, run, skip, fly, creep, etc.

Have child blindfolded and guess other children by the sound of their voices.

One child is blindfolded and says, "Where art thou Rachel (Reuben)?" Another answers, "Here I am." First child tries to catch him by following the sound of his voice.

"Telephone Game." One child stands behind a screen or sits down behind the teacher's desk. All the others stand. One, indicated by the teacher, calls, "Hello, Central," and if able to recognize the voice, Central replies "Hello," and calls the child by name, and that child sits down. When all have had a chance to call up, a new Central is chosen.

"Look-at-me Game." Children in a large circle. One blindfolded in the center. First one, and then another calls out "Oo-hoo (child's name) look at me." The blindfolded child turns quickly to face the direction from which the sound came.

Have child listen to simple commands, and then perform them. Example: Shut the door and open the window. Gradually increase the number of commands.

Have child repeat numbers after you, also sentences.

Play simple music, and have child sing it.

"The Puppy's Bone." One child sits on a low stool and covers his eyes. His "bone" is on the floor a foot or more behind him. Some child indicated tries to creep up and steal the bone without making a sound. If he hears the least sound of footsteps on the floor, the "Puppy" says, "Bow-wow," and the other must return to his seat. When some one is successful in getting the "bone," the class claps, and that child is the "Puppy."

3. TACTILE TRAINING.

Have a wonder-bag attractive in color. Put in one object such as a cup. Let the child, blindfolded, put in his hand, and try to tell what it is by feeling of it. Add another object, and ask him to find the cup. Increase the difficulty of finding the cup by adding more objects. Vary this work by having the bag full of objects and allowing the child to take out the different things, naming them as he does so.

Let the child feel of many different objects while blindfolded, and tell if they are rough, smooth, hard, soft, wet, dry, hot or cold.

Let the child go about the room blindfolded, another child leading him, and name the objects he touches, telling you their characteristics, that is, if they are smooth, rough, hard, etc.

Have child lift different objects, telling if they are heavy or light.

Have a miniature set of weights, and allow him to arrange them according to weight. Vary this experiment by having him begin with the lightest and go down to the heaviest, and vice versa.

Let the child handle the tools for manual training and gardening and learn those easiest to lift and those hardest. Also those which are blunt, and those which are sharp.

Have boxes of same size, but different weights and have child arrange them consecutively.

Have celluloid and rubber toys, as well as the heavier mechanical toys, so that in play, the child can learn their weight distinction.

Make with a child a scrap book of common wrapping paper and help him put in it bits of silk, velvet, linen, cotton, wool, etc. When he learns these textiles have him name them blindfolded, by touching.

Have him feel clothing of his mates and tell you nature of cloth.

Have him feel in a huge box and while his eyes are shut name the textile he removes. Let another child put them back feeling each and naming it.

Let child draw around objects with pencil and crayon, then let him use his finger to trace around same; finally place an object in his hands which are behind him, and have him name by feeling around it. Blindfold him, place object in his hands in front of him, and have him name. Later let him draw, describe and name object. Work this into a team game. One child hand object, another feel and name, etc. Do this work with cut

letters and have pictures of flowers with the name of the flower cut out under it. Give child box of wooden letters and let him fill in name while blindfolded. Vary this with animals, birds, fishes, etc.

4. GUSTATORY TRAINING.

Have in a box small bottles of molasses, ginger, cinnamon, sugar, clove, cayenne, vinegar, salt, black pepper, mustard, alum, quinine, Jamaica ginger, tea, water, cocoa. Begin with two contrasting tastes, such as vinegar and sugar, and have a blindfolded child tell how they taste; add others and let him name them.

Let child taste and tell flavor of candy, such as peppermint, sassafras, chocolate, wintergreen, lime, lemon, clove.

Let child taste different fruits and tell their names.

5. OLFACTORY TRAINING.

Have in a box bottles of vanilla, iodoform, pennyroyal, lemon, peppermint, lavender, spearmint, wintergreen, vinegar, water, coffee, kerosene, ammonia, camphor. Begin with two contrasting odors and have a blindfolded child tell how they smell. Add others and finally advance to having him name them. Use small bottles which are large at the top with glass stoppers.

Have the different food odors established, such as tea, coffee, butter, lard, etc., so that impurity in food values may be detected quickly.

Allow child to relate the pleasing odors smelled on a journey through the woods; try this at all four seasons of the year. Take children to gardens, if possible, and allow the fragrant odors to be drunk in and gradually distinguished. Blindfold child and have him name flowers from their fragrance.

Teach the odor of gas and heat so that child may protect himself through sense of smell.

Any druggist will fill out cases of oils, spices, perfumes, etc., and if informed of their use, very reasonably. If this work is done more as a game than a lesson results are very striking and headway very rapid.

A stand to hold the bottles can easily be made of wood, 15 x 8 x 1½ inches. Three rows of holes, five in a row, can be made with an extension bit.

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OBJECT AND INFORMATION LESSONS.

AIM.

1. To open the eyes of the children to the world around them.
2. To cultivate the senses, and the power of observation.
3. To cultivate language ability.

SUGGESTIONS.

Children should see, touch, taste, listen and handle for themselves. They should examine many specimens and make their own classifications. The same lesson can be adapted to different mental ages.

An abundance of material is a necessity.

Each animal lesson where the animal itself cannot be presented demands a large picture, accurately drawn and colored.

Provide a form book for each child. Allow him to cut and paste the forms studied.

Let the children cut from magazines and mount collections of pictures, as, with lesson on transportation, pictures of all kinds of vehicles, trains, boats, etc.

FORM LESSONS.

Ball, cube, cylinder.

Circle, square, oblong.

Square, blunt, sharp corners.

Straight, curved, broken lines, straight lines standing, leaning, lying down.

Surface—inner, outer, face, edge.

Angles—right, acute, obtuse.

Lines—vertical, oblique, horizontal.

Triangle, pentagon, hexagon.

Solid, plane-figure, line.

Circle—circumference, diameter, radius.

As soon as terms are learned apply them to former figures.

Children classify forms themselves after having finished the course.

QUALITY LESSONS.

Children should perform many experiments before generalizing. Most children can compare and discriminate. Choose lessons adapted to ability of the children.

Hard, soft. Sweet, sour. Thick, thin.

Rough, smooth. Brittle. Porous. Absorbent.

Combustible. Inflammable. Transparent, opaque.

Flexible. Elastic. Odorous, inodorous. Fragrant.

Natural, manufactured, artificial.

SPECIMEN LESSON.

Brittle.

Things that break easily are called brittle.

“Drop this chalk and see what happens.” “It breaks.”

"Drop this piece of glass and see what happens." "It breaks."

"Drop this piece of wood." "It doesn't break."

"See if you can break this piece of iron." "It doesn't break."

"Here is a thick piece of wood. Can you break this?" (Child after effort does so.)

"Try this piece of glass." (Child breaks it.)

"If you had to break many pieces of this wood and many pieces of this chalk, which would you rather do?" "Break the chalk."

"Why?" "Because it breaks easier."

"When anything breaks easily like the chalk and glass we say it is brittle."

"Tell me something at home that you have to handle very carefully so they will not break." "Dishes."

"What may we say about china dishes?" "They are brittle."

"Tell me all the things you can think of that are brittle."

"China, glass, chalk, some candies, break easily and are called brittle."

COMMON OBJECTS.

Parts and uses and how made: bell, cap, pin, needle, chair, fork.

Sun, moon, stars.

Direction: over, under, between. Have child tell how he reaches home.

Means of telling time.

Parts, uses, growth of: apple, orange, tree, flower.

Vegetables, fruits.

Forms of water. Uses of water.

Parts of a house.

Kinds of buildings.

Locomotion: natural, man, beasts, birds, fish.

Transportation: auto, carriage, donkey, horse, camel, elephant, boat, train, freight and passenger.

On trail, path, street, sidewalk.

Communication: U. S. mail, newspaper, book, telephone, telegraph, wireless.

Occupations in general: plumbing, fireman, policeman, mines and mining, bricklaying, laundering, farmers and farming, tools, etc.

Races of men.

Musical instruments.

Fabrics: cotton, flax, wool, silk, linen.

Foods: wheat, nuts, spices, sugar, meat, salt.

Coal, iron, steel, paper.

Coins, postage stamps.

Relationships.

Have child tell the story of his day.

Name objects seen on way to school.

Have child pass by many objects and name those he can remember.

ANIMAL LESSONS.

Cat. Tiger. Leopard. Lion.

Dog. Fox.

Cow. Sheep. Horse. Zebra. Donkey. Pig.

Elephant. Camel. Giraffe. Hippopotamus. Kangaroo.

Squirrel. Mouse. Monkey.

Ostrich. Alligator. Turtle.
Hens. Ducks. Geese.
Frogs. Toads. Bees.
Common Birds. Wading Birds.
Whale. Seal. Walrus.
Winter homes of birds and insects.
Canned and dried fish.
Cod. Salmon. Herring. Sardines.
Pack animals. Coverings of animals. Noises of animals.
Sponge. Coral. Nests. Eggs.

MOTOR TRAINING.

(With Special Reference to the Needs of the Weaker or More Helpless Children.)

"Without motion the elements which go to form new tissue can never be brought to perform their function. The organic purpose of the atoms would be defeated without motion."

The working of a muscle may be passive, active or resistive. A weak or partially paralyzed muscle should be given these three kinds of exercise.

Example: A child's arm may be flexed and extended by the teacher; he may himself make these motions; and finally make them pulling and pushing against a resisting force.

LEG MOVEMENTS.

Walking a chalk line. Add interest by having the line form some design, as, during the valentine season, a huge heart drawn on the floor.

Ladder. Stepping on each round.

Stepping in each space.

Skiping one round, then two.

Skiping spaces.

Walking on side.

Walking on the side and then on a round.

Lifting the knee. Place two or three bushel boxes on the floor one yard apart. Children march around the room and step in each box, being careful not to touch the side.

Boxes as above, but with open side next the floor. Children march and step up on each box.

Platform (8" or lower). Child steps up, turns and steps down, a given number of times.

The two or three steps leading into portable buildings afford a good place for practice to children who would be frightened or fatigued by a full flight of stairs.

BALANCING.

Carry basin or cup full of water.

Balance beam. (See Physical Exercises.)

ARM, WRIST AND HAND MOVEMENTS.

Place wand in child's hands.

Drop wand into child's hands.

Toss wand to child.

Slapping hand game. Children stand in a circle holding out their hands. A child in the center holds a ten-inch disk of heavy cardboard and tries to slap the extended hands before they can be drawn back. If he succeeds he changes places with the child hit.

Throwing. Blackboard target with a snow-man or other object of interest drawn in the center. Throw wet balls to aid in exact scoring.

Throw bean-bags into a box.

Raising arms. Children seated. They pass rulers over their heads from front to back, then from back to front of row.

Children standing in a row. They pass a medicine ball over their heads up the row, then turn quickly ready to receive it as it comes down the row again.

Pulling.

Two children hold large wooden rings and pull against each other.

Same as above with wands.

Game—Tug of War.

Game—Bull in the Ring.

Red elastic tape 1 inch wide, 15 inches long. Child holds the two ends, pulls it to a given length (30 inches or 1 yard) and holds it while all count to 20.

Tape as above and a similar piece of blue. Two contestants strive to see which can pull to the greater length.

(In the above and many of the following exercises the introduction of color makes them more stimulating and adds to the spirit of pleasant rivalry and play.)

Two large strong bottles. Press the corks in very tightly. Two children see which can first pull out the cork.

Wringing, Twisting, Spinning and Twirling Motions.

Cloth wet with warm water. Child tries to wring out as much water as possible.

Child takes cover from Mason jar or candy jar when screwed on firmly. Child twirls button mold tops.

Picking-up motions. In all these, dictate the use of right hand, left hand or both hands.

Throw a quantity of small pieces of paper on a platform or large table. Children see who can first pick up one hundred pieces one at a time.

Throw a quart of colored pegs as above. Children pick up one at a time, go to seats and count them, laying them out by tens.

Pour out a quantity of shoe buttons as above. Each child has a small paper cup to fill.

Eight milk stoppers in a row on each desk. Upper side colored or decorated. Children turn them over to plain side, then turn back. Use college colors or pictures of birds (they fly away, then come back) or snow stars (they melt, then form again).

Cutting Motions.

Cutting newspapers for practice.

Cutting rags.

Placing.

Pick up soft lentils with a toothpick until it is full.

Design drawn on cloth and stretched on frame. Outline with pins.

Peg board designs.

Outline pictures on thin wood. Holes for pegs about one-half inch apart. Fill with pegs.

Outline pictures on cover or bottom of plain shallow pasteboard box. Holes for pegs made with scratch awl.

Two large pin cubes. Enough red pins to fill one side of one. Blue pins for the other. Two contestants remove the pins one at a time, then replace.

Two children see which can build the highest tower with two inch cubes or other blocks.

Bead-stringing. Race for the longest string in a given time.

EXERCISES OF PRACTICAL USE.

Lacing stick.

Top of a shoe nailed to a round stick of wood. Lace.

Braiding strips of red, white and blue cambric.

Tying a bow-knot.

Buttoning. Strips of heavy cloth with buttons and button-holes.

Winding. Two large spools. Three yards of red yarn or silkateen tied to three yards of blue and one end tied to each spool. Wind from one spool to the other.

Wind the Germantown used in school.

Wind the graphophone.

Raising and lowering windows and curtains.

Opening and closing doors.

Dusting erasers.

Cleaning blackboards.

Cleaning shoes.

Carrying parcels or messages.

Approved by William H. Devine, Director of Medical Inspection, Boston Public Schools.

PHYSICAL TRAINING.

I. INTRODUCTION.

Children should be encouraged to assume a good position for carriage of the body *at all times*—sitting, standing, walking, running, or in plays and games. Grace and ease should be sought and rigid unnatural attitudes avoided. Open windows for all exercises.

When a class is dull, restless or inattentive, a lively exercise, an active game or a few breathing movements will quickly refresh mind and body.

II. FORMAL GYMNASTICS.

Outlines of these exercises may be found in any regular grade course of study; in manuals of military drill, or books describing Swedish system of gymnastics.

III. BREATHING EXERCISES.

Most important in the gymnastic lesson. In general, the best practice for school and gymnasium work is to inhale through the nose and exhale through the mouth.

A. Inspiration.

Let the lungs be *slowly filled* with air, meanwhile forcing the stomach (abdomen) well forward, so that the lower part of the lungs is first filled.

B. Expiration.

Expel the air *forcibly* by pressing the stomach (abdomen) inward and upward against the lower part of the lungs.

1. Make outward circles with arms, breathing deeply, imitating birds in motion.

2. Let children play they are blowing into a paper bag, then burst it (clap hands).

3. Let children make-believe they are sawing wood and must blow away sawdust.

4. Inhale slowly and whistle while exhaling.

IV. MARCHING.

A. Simple marches, single file, in time to music.

B. Grand march, by 1's, 2's, 4's, 8's—4's, 2's, 1's—and figures.

C. March with imaginary drums, guns, trumpets, etc. Wands may be used. For older girls, something decorative may be carried. Long reeds, twined with pink paper roses, and held arch-wise over the head, are a help with self-conscious pupils.

D. Count aloud eight times and march, skip, run, hop, fly, walk.

E. March, then stop music suddenly. Change music for running, creeping, hopping, walking, skipping, high-stepping, flying and finally, march to seats. The children should not be told what to do, except by the music.

Suitable music for above may be found in: "School and Gymnasium Marches," the Half Dollar Music Series (Oliver Ditson Co).

V. SETTING-UP DRILL.

Music: "In the Park" (Oliver Ditson Collection).

A. Start with arms extended, palms up. Pupils count aloud, 8 counts for each movement.

1. Arms forward fling, back to position.
2. Arms upward fling, back to position.
3. Arms upward fling, clapping hands over head and downward fling, clapping sides.
4. Arms upward fling, clapping overhead, and arms backward fling, clapping in back.
5. Head forward and backward bend.
6. Head to right and left bend.
7. Trunk sideways bend, alternating right and left.
8. Head twist, alternating right and left.
9. Trunk twist, alternating right and left.
10. Knees bend, downward, with hips firm.
11. Knees bend, upward, alternating right and left, with hips firm.
12. Leg raise, stiff knee, alternating right and left, with hips firm.
13. Trunk bend, with arms extended, alternating right and left. (Wind mill exercise).
14. Arms upward fling, trunk forward bend, until fingers touch floor.
15. Stride jump.
16. Deep breathing. Arms forward and upward fling, sideways downward sink.

VI. BALANCE BEAM EXERCISES.

A. *Single Beam.*

1. Walk the length of the beam forward, arms extended, head erect, Repeat same, backward.
2. Forward, dip, then step. Same, backward.
3. Forward, balancing book on head. Same, backward.
4. Forward, balancing book on head, and one on each hand. Same, backward.
5. Forward, raising knee before stepping.
6. Forward, bending knee between steps.
7. Forward, with arms folded. Same, backward.

B. *Double Beams.*

Two parallel beams and two lines of children, playing as partners.

1. Walk to slow march time. Music: "Rally Round the Flag."
2. Touch forward and step, march time. "Dixie."
3. Touch forward twice and step, slow waltz time. "Blue Danube."
4. Touch forward, backward, forward and step, march time, or fast waltz time. "Our Director."
5. Dip, and step, fast waltz time. "Till We Meet Again."

VII. BALL DRILL.

Material: Hard rubber balls, 2 inch size.

Music: "Cecile Waltz."

1. Outward circle, right, and toss. Count 1-2.
2. Outward circle, left, and toss. Count 1-2.

3. Alternate with 1 and 2.
4. Double outward circle and toss. Count 1-2.
5. Outward circle right, pointing right toe at side; toss, bringing right foot to position. Count 1-2.
6. Inward circle, right, and bounce.
7. Inward circle, left, and bounce.
8. Alternate 6 and 7.
9. Double inward circles and bounce.
10. Double outward circles and toss, stepping forward; bring backward foot up to forward on the toss. Count 1-2.
11. Double inward circle, stepping back, and bounce; bring forward foot back to the other foot. Count 1-2.
12. Right arm out at side, overhead, out at side, and toss ball over to left hand. Count 1, 2, 3, 4.
13. Same as 12, pointing right foot at side, across, behind, at side, and back to position.
14. Outward circle right; arm out at side; arm over head and bounce ball from left shoulder, catching ball with left hand. Count 1, 2, 3, 4.
15. With double outward circle, lunge diagonally forward; toss and return to position. Count 1-2.
16. Alternate outward circle, right, and toss; inward circle, right and bounce. Count 1, 2, 3, 4.

VIII. DUMB-BELL DRILL.

Music: "Glow Worm."

1. Stretch dumb-bells forward from chest, 4 counts.
 2. Stretch sideways from chest, 4 counts.
 3. Stretch upwards from chest, 4 counts.
 4. Stretch downward from chest, 4 counts.
 5. Fling forward, upward, and sideways, downward, 4 counts.
 6. Fling forward, upward, rise on toes, sink, 4 counts.
 7. Fling forward to shoulder level and knees, deep bend, 8 counts.
 8. Fling forward and upward; touch floor with bells, knees stiff; raise, position, 4 counts.
 9. Circle outward from chest.
 10. Circle inward from chest.
 11. Strike bells together overhead and in back.
 12. Strike bells together in front and in back, below waist-line.
- NOTE—With 11 and 12 play "Anvil Chorus."

IX. WAND DRILL.

Music: "Till We Meet Again," or "Bubbles."

Each movement to be done 4 times.

1. Wand forward and down. Count 1-2.
2. Wand forward, upward and down. Count 1-2.
3. Wand forward and up, forward and down. Count 1, 2, 3, 4.
4. Wand at chest, stretch forward, at chest, over head, behind shoulders, over head, chest and down. Count 1, 2, 3, 4, 5, 6, 7, 8.
5. Same as 1 or 2 with foot placing forward and back to position.
6. Same as 1 or 2 with foot placing sideways and back to position.
7. Same as 3 with foot placing forward and back.

8. Same as 3 with foot placing sideways.
9. Same as 4 with foot placing forward, sideways, backward and in position.
10. Same as 5, adding heel raising and sinking while wand is held in front.
11. Same as 2 with heel raising.
12. Wand forward, upward, with feet placed sideways; wand back of shoulders; trunk bending forward and up twice; wand over head; position. Eight counts.
13. Wand back of shoulders; knees bending upward, forward. Sixteen counts.
14. Wand back of shoulders; with a jump, place feet sideways; bend or twist trunk.
15. Arms forward with foot pointing sideways; arms over head with lunge sideways.
16. Arms forward, upward, with foot placing sideways; bend or twist trunk.
17. Wands back of shoulders; stride jump.
18. Wands forward, raise and downward sink, with deep breathing.

X. INDIAN CLUBS.

Music: "Blue Danube."

1. Outward arm circle.
Inward arm circle
Parallel arm circle.
2. Outward arm circle; high dip.
Inward arm circle; high dip.
3. Same as 2, with low dip.
4. Pendulum swing.
5. Outward arm and shoulder circle.
Inward same.
Parallel same.
6. Combination. Parallel arm and shoulder circles three times; foot placing forward, right. Three hand circles; arms extended.

XI. STUNTS.

1. Cartwheels, and hand-springs.
2. Somersaults.
3. Jumping over rope held by two children. See who can jump highest.
4. Jump-rope exercises.
5. Any activities done by Camp Fire Girls, Girl Scouts, Boy Scouts.

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GAMES.

"Play is the greatest agent of unity and totalization of body and soul."
G. Stanley Hall.

I. SUGGESTIONS.

1. Always insist upon fair play.
2. Never let children play to the point of excitement or exhaustion.
3. There must be freedom, but never license.
4. Comment on good play as well as poor play.
5. Name winning side whenever possible.
6. Teach children to love play for its own sake, for its value in training soul, mind and body.

II. BALL GAMES.

1. Hit or Miss. Teacher uses a basket-ball or some soft ball and throws in rapid succession to children in different parts of the room. If any child is not alert every minute, he will be hit.
2. Circle Tag Ball. Players in circle. "It" in center. Pass or toss ball around in circle while "it" tries to get it. If "it" tags the ball in someone's hand, that child must be "it."
3. Guess Ball. One player turns back to others and they pass the ball from one to another. Finally, one player hits "it" who tries to guess who was guilty.
4. Call up Ball. Players in circle. One in center calls the name of a child as he tosses up the ball. That child must catch it. Two names may be called at once, or the children may be numbered, and two numbers called at once.
5. Dodge Ball. Players in circle, also a group inside of the circle. Those in circle roll the ball, trying to hit the others, who jump to dodge it.
6. Clap Ball. Players in line, facing a teacher who throws the ball. Each claps once before catching, then twice, three times, etc. If one fails to clap the correct number of times, he must go to the end of the line.
7. Pass Ball. Player in center tries to pass ball between the separated feet of those in the ring, who bend over and bat it out with their hands *only*. If the ball goes through, player must leave the circle.
8. Arch Ball. Players arranged in two vertical lines. Number one in each row has a ball, which he passes over his head at a given signal. Each child passes it over his head until it reaches the last child, who runs to the front and passes it back. The game continues until number one of either line is back in place, then his row has won.
9. Straddle Ball. Like arch ball, but the ball is passed between separated feet.

III. CIRCLE GAMES.

1. Drop the Handkerchief. Players in circle. "It" walks around outside of circle and drops handkerchief behind some child who must chase "it" and try to catch him before he reaches vacant place. Bean bags or other objects may be substituted.

2. Herr Slap Jack. Like No. 1, but the one tagged runs in the opposite direction. When they meet, they must bow or do various gymnastic stunts before passing, then see who reaches vacant place first.

3. Cat and Rat. Players form a circle with a rat inside and a cat outside. With hands joined they must keep the cat from the rat. The cat tries to get under the joined hands. If he is successful in getting the rat, choose a new one. Finally, have two cats after one rat.

4. See Saw. Children in circle in groups of three. One has arms raised, while two and three stand at each side, two on tiptoe and three with knees bent. Rise and sink to music, one going up as the other goes down.

5. Swing Game. Song. "How do you like to go up in a swing?" (Red Jenks). Children stand in circle in groups of three. Two join hands to make swing, other swings to music. Every eighth count he goes under swing and runs to next group to play there.

6. Parcel Post. The players stand in a circle, with "it" in the center. Each player represents a city. "It" says: "A parcel is going from —— to ——" and names two cities. The players named for these cities change places, while "it" tries to secure one of the places. The one left is then "it."

IV. GUESSING GAMES.

1. Hunt the Key. Players form a circle. Pass a key back and forth, keeping hands in motion. Player in center must discover who has the key.

2. Button, Button, Who has the Button? Played like No. 1, but those in ring ask this question, while "it" says, "John has the button." If correct, they change places.

3. Hide the Thimble. Chalk or any object may be used, and it is especially interesting if peanuts or kisses are hidden. One child blinds while object is hidden. Teacher plays soft music, then louder as child nears the hidden object, or children say, "Cold, freezing, warm, warmer, hot and burning." Every child may blind, then all look together for hidden objects.

4. Children in seats. One child blinds while two or several children change seats. Guess who?

5. Cuckoo. One child blinds while another hides and calls, "Cuckoo." The blinded child must find the cuckoo, tracing the sound.

6. Bell Game. Children in circle. Child blinded in center. Another rings bell some distance away, high or low. One in center must point in direction of bell. *Variation.* Children in seats. One child hides, while another puts the bell in his desk and rings it. Hidden child must return and guess who, from the direction of the sound, or appearances of children.

7. Who Art Thou? Player blinded in center. Others move about in circle until signal is given to halt. Blinded player touches someone whom he must recognize by the feeling of his clothing. If unsuccessful, he asks, "Who art thou?" Player answers, "I" in natural voice. If recognized, they must change places.

8. Blind Man. Like No. 7, but the player stands behind blinded one and says, "Good morning, Joseph." The blinded one may have a wand and point to some child who takes it and says, "Good morning."

9. French Blind Man's Buff. All players are numbered. One blinded in center calls two numbers, and as those two change places, he tries to catch them. If successful one takes his place in center.

10. **Have You Seen My Sheep?** Players in circle. One outside is called the shepherd. He walks around, touches someone and says, "Have you seen my sheep?" Player touched replies, "How was he dressed?" Shepherd describes the clothing of some player, whereupon that player recognizing his description, runs around and tries to reach his place again before the shepherd catches him. If caught, he is shepherd.

11. **I Saw.** Teacher says, "I saw—." Then she imitates a flying bird. Children answer, "A bird." Every child flies like a bird. Let children suggest things to imitate, as an automobile, a prancing horse, a leaping rabbit, a soldier marching, etc.

12. **Quiet Guessing Game.** All children in seats. One says, "I am thinking of something in this room which begins with b." Children guess what it is: book, ball, basket, banner, bracelet, and other objects. The child who guesses may have the next turn. It may lead on to things outside of the room, even classifying as, round things, colored things, beautiful or ugly things, buildings, trades, countries, etc. It may be used as a spelling lesson or a geography lesson.

V. OUTDOOR GAMES.

1. Many of the games are adapted for out-door use, especially the ball games, including baseball, basket-ball, football and medicine ball games. The relay races are of even greater value when played out-doors.

2. **Jump the Shot.** Players form a circle. One player in center, swings a long rope to which is attached a bag of sawdust or something fairly heavy, at the end. This bag must be swung from the rope so that it will come under the children's feet (low). The players must jump the bag as it comes to them, for if they are hit by the bag they must leave the circle and may only rejoin it when two more players have been removed. The speed and height of the rope may be gradually increased. Children may jump on one foot with arms at sides or on hips.

3. **Boo.** All children on given line. One child "it" some distance away. "It" turns back and calls, "1-2-3-4-5-6-7-8-9-10-Boo," and turns quickly. While he is counting other players move quickly toward his goal, but they must stop before he turns, for if he catches them moving they must return to the line. The first player to reach goal may be "it."

4. **New York Trade.** Two captains choose equal numbers of players for sides A and B. One side decides upon a trade and how to represent it. A's side walks to a line where they meet B's side. A's side says, "Here we come." B's side asks, "Where from?" A's side answers, "New York." B's side asks, "What's your trade?" A's side acts out a trade for B's side to guess. If B's side cannot guess, A's has another trial. If B's side guesses, A's side runs quickly toward their line or house, while B's side pursues and tries to catch some of A's men. If successful the men caught must stay with B's side and help him next time to catch the remainder of A's men.

5. **Hill Dill.** Children are arranged in two parallel lines about twenty-five feet apart. "It" stands between them and calls, "Hill Dill, come over the hill, or else I'll catch you standing still." The players on both sides run to opposite sides. "It" tries to tag them before they are safe on their line. If he tags any, those players must help when he calls again, and so on, until every player is tagged.

6. Fish and Net. Like Hill Dill, but one side is called the fish, the other the net. End men of net try to join hands around fish instead of just tagging.

7. The Miller is Without. Like Hill Dill, but the player in center is called the miller; there is also a watchman for each goal. The miller addresses the watchmen from the center, "Hello, hello!" Watchmen answer, "Who is there?" Miller replies, "The miller." Watchmen ask, "What do you want?" Miller answers, "A sackful of children." Watchmen say, "Then catch them!" Here the children escape to other goal. If the miller tags one, that one becomes miller; the miller becomes watchman of the goal, and the watchman joins the players.

VI. SEAT GAMES.

1. Like Jerusalem Chairs. If there are fifteen children and fifteen desks and chairs, one chair is marked to be unoccupied. The children march until music stops, then they try to get one of the fourteen seats. One child is left out of the game. Each time one chair more is to be vacant, until there are but two children marching for the same chair.

2. Seat Race. Considering that there are fifteen children in the room in three rows of five each; number rows crosswise (1-2-3-4-5) making three children with the same number. Each child must remember the number of his row. A chalk mark is made in the aisle at the front of each row. Teacher calls the number and the three children must run and touch the line and return to their seat. If a child in the middle row wins, one is scored for him. The game is ten. Each child must be in perfect position when not racing.

3. Tenpins. Arrange tenpins in group on a given line. Roll ball and score as many as are knocked down. Tenpins may be numbered 2-4-5-10 and others, so that there will be a chance for bigger scores and also for adding.

4. Basket Game. Place waste basket at front of room. Stand on a given line. Score five for each time that a ball is thrown into the basket.

5. Blackboard Game. Make a circle on the board with many numbers written inside. Children stand on a given line and aim soft ball at numbers. Score.

6. Simon Says. Children may stand or sit. Teacher says, "Simon says, 'Thumbs up.'" Children hold up thumbs. Teacher says, "Simon says, 'Thumbs down.'" Children put them down. Teacher must always say, "*Simon says,*" if children are to obey command. If she says, "I say, 'Thumbs down,'" and the children obey command, they are out of the game, as they must do *only* what *Simon says*.

7. Statues. Beautiful or Grotesque. Children stand with arms outstretched, at seats. One child walks up and down the aisles vigorously twisting the arms and bodies of the children, who pose as beautiful or grotesque statues. The one who is most beautifully or grotesquely posed may do modelling next time.

8. Cross and Recross. Two rows with an equal number of players sitting at their desks. When "it" claps his hands the players in adjoining rows of seats cross to opposite rows. If "it" does not succeed in taking a seat while players are changing, he claps his hands, and all recross to their own seats. The player who loses his seat is "it."

9. *Vis-à-Vis*. Players stand in couples around the room. Whenever "it" calls, "Face to face," two in each couple face each other. When "it" calls, "Back to back," they turn their backs. When he calls, "Vis-à-Vis," they must all change partners. "It" now tries to secure a partner. Player left alone is now "it."

10. *Follow My Leader*. One child is leader and does various stunts with hands or other parts of body. Others must imitate. If unable to imitate they are out of the game.

11. *Indian Club Game*. Make two equal lines of players. A child stands at head of each line about four feet away from No. 1, holding an Indian club in a slanting position, with the head toward the player. Player tries to get a rope ring on the club. If successful it scores five. He runs to rear of line and the game continues until he is in place again. This may be played with the left hand, scoring ten instead of five.

12. *Skewer Game*. Pile some skewers, pencils, toothpicks, or some such objects on a table. Each child in turn tries to remove one without touching or moving another. If he touches, he forfeits his turn.

13. *Pony*. In an open space in the room place the balance beam with one end up in a pupil's chair, and the other on the floor. Children run, trot, and gallop like ponies, jumping over this beam when they come to it. The slanting position makes it possible for each child to jump and clear the beam easily.

14. *Jack-in-the-Box*. Children standing. Teacher's arm held up as the box cover. She lowers it, and all stoop low between desks. She lifts it suddenly, and all spring up.

VII. RACES.

1. *Relay*. Players in equal groups behind each other. No. 1 runs to a given point; comes back and tags the hand of No. 2; then goes to end of line. No. 2 tags goal, returns and tags No. 3's hand, and runs to end of line behind No. 1. This continues until No. 1 is back in place. Wherever No. 1 is in place first, that row wins.

Variations. Players may hop, skip, fly, walk stiff-legged, or even walk on "all fours."

Use erasers, chalk, potatoes, dumb-bells, clothespins, or other objects placed a few feet apart, and an equal number before each row. No. 1 must put first one, then another and so on, one by one, into a box, which is on the goal. Returning he must tag No. 2 who runs and replaces objects from box, one by one. No. 3 returns them to the box and so on, until No. 1 is back in place.

Chop Sticks Relay. Player must carry a ball between two sticks. If he drops the ball, he must pick it up, thus delaying his team.

2. *Chariot Race*. Have two groups of four boys each, who lock arms and imitate horses. Have a driver for each group. He holds the reins which are around the four. Place two boxes about twenty-five feet away. Horses must run around these boxes.

VIII. TAG GAMES.

1. *Hand Tag*. Players in circle raise hands, turning palms upward. "It" tries to tag some hand while those in circle lower it when "it" approaches. One tagged must be "it."

2. Double Tag. Players in couples, having one couple "it." Do not separate couples. Tag only couples.

3. Shadow Tag. "It" steps on the shadow of someone, who is then "it."

4. Squat Tag. Anyone not in a squatting position will be "it," if tagged.

5. Token Tag. Players in seats; hands behind backs. "It" runs around and places a token in someone's hands. The receiver runs after "it" and tries to catch him before he reaches the vacant seat.

6. Fox and Cheese. Players in line with arms held tightly around the waist of the one in front. First child holds arms out straight and swings around. Fox tries to tag child on the end.

7. Beater Goes Round. Players in circle; hands behind. Beater goes around with a stiff piece of cloth and hits someone's hands. One hit runs after him, trying to catch him before he reaches the vacant place.

8. Boston. Players in circle; "it" in center. Boys are numbered *odd* and girls *even*. "It" calls an odd and an even number. These change places while "it" tries to tag one. "It" sometimes calls, "Boston," and all change.

9. Three Deep. Players in a double circle—"two deep." There are one player who is "it" and an extra child. The extra runs in front of a "two," making "three deep." "It" tries to tag the end or back one of this group of three, but this back one immediately runs to the front of another group, making three there. The back one in this group runs to the front of another, and so on. If tagged as the third one in the third group, player must be "it." Avoid being the third one in a group.

IX. BEAN BAG GAMES.

1. Children put heads on desks. "It" walks around and drops a bag on some desk. That child must pursue, *walking*, and try to catch "it" before he reaches vacant seat.

2. Players arranged in two parallel lines. Number one in each row passes bag over his head at signal. Each player passes bag in this way until it reaches last child, who runs to front and passes it as before. Game is won by number one, of either line, who reaches original place first.

3. Players seated, in three rows of five each. At signal, number one places bag on desk behind, and bag is thus passed until it reaches number five who runs to front seat, upon which children in that row change to seat behind. Game continues until players in any row return to original seats, and are thus the winners.

4. Players seated, in three rows of five each. Three goal points indicated by chalk line two feet beyond front desks, directly opposite aisles. Number one in each row leaves seat on right side at signal, places bag on goal, returns on left side, tags second player and is seated. Game continues until all have played.

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One Hundred and Fifty Gymnastic Games. Compiled by Alumni of
Boston Normal School of Gymnastics.

Community Service, 1 Madison Ave., N. Y., will furnish a wealth of
material on application.

FOLK DANCING.

"The dance seems to fulfill every requisite of an ideal exercise—the practical use of all the muscles, the acme of pleasurable emotion, and the satisfaction of the esthetic sense."

I. INTRODUCTION.

Folk dances are valuable in that they make for the development of a child morally, socially and physically, resulting in deeper concentration, interest, confidence, self expression, play of the social instincts of courtesy and grace, skill, endurance, alertness, and the subordination of the individual to the co-operation of the group. These dances are often correlated with the literature.

Fairy Tales: "Shoemaker" and "Hansel and Gretel" Dances.

Poetry: "Snowstorm," "The Swing."

Mother Goose: "Hey Diddle Diddle," "Jack and Jill."

Mythology: "May Dances" (Druid and Roman customs).

Traditional: "King of France."

Arabian Nights: "Away to India."

In folk dances are expressed the feelings of a people, as in the war dances of the Indians; seasons and weather; birth, marriage and death; greeting and farewell; rejoicing and mourning; trades and occupations. We recommend these dances chiefly for their simplicity of comprehension and execution, their physiological value in bringing most of the larger muscles into play, and their general character of moral and social uplift. The rhythms may suggest others—dependent on the seasons, history, geography or language lessons, or the several holidays during the year.

II. SUGGESTIONS.

Ability to dance gracefully comes only through regular and patient muscle training and development.

Pupils must not expect to plunge at once into some difficult co-ordination.

Where music is used choose good selections with marked rhythm and appropriate to dances taught. If teachers do not play, a victrola may be used with a great variety of suitable records.

III. PRELIMINARY WORK.

A. In ring—to music.

1. Teach group to walk—placing ball of foot on floor before heel.
2. Teach group to march.
3. Teach group to run—heels off floor entirely.
4. Teach group to skip.
5. Teach group to side gallop and forward gallop.
6. Teach group stamping—left, right, left.
7. Work for lightness on toes—idea of feathers.

8. Begin work on time and place for bows (for the boys), and curtsies (for the girls); shaking hands; turning around in place, etc.
- B. Rhythmical exercises—for balance and keeping time to music—especially good for undeveloped children.
 1. Distinguish between different rhythms—waltz, two-step, polka, schottische—by clapping.
 2. Raise arms forward, upward, pause, lower.
 3. Sway body and move arms.
 4. Simple foot pointings with arm and trunk motions.
 5. Imitate movements of birds, butterflies, etc.
 6. Do various movements used in dances; fan movements of Japanese dance; pulling movements of Shoemaker's dance; jumping movements of Indian dance, etc.
 7. Suggestive rhythms—good for class groups:

The Rocking Horse. One foot in front; rock forward and back holding reins in hands. Waltz rhythm $\frac{3}{4}$.

The Fairies. Run lightly, arms moving gracefully for wings; flit in and out; gather in small circles. Waltz or $\frac{3}{8}$ rhythm.

The Dwarfs. Eccentric positions of children, each presenting his own idea of a dwarf, all "scrunched up" and hobbling around in time to eccentric music.

Dolls in Arms. (Make believe.) Rock in time to singing of lullaby "Sweet and Low" or "Rock-a-bye Baby."

The Swing. Partners join hands and swing in time to music of any swing song—one movement to each measure. Music: "How Do You Like to Go up in a Swing?"

Ring Christmas Bells. Ring big bell in the belfry, using both arms and swaying body forward and backward with rope movement. Music: "Jingle Bells."

Galloping Ponies. Hold reins tightly and gallop. Music: "Yankee Doodle."

Train on Track. Imitate train—fast or slow movements following music played, which may be any $\frac{3}{4}$ rhythm.

Formal rhythm work with wands, bounding-balls, dumb-bells, etc., may be done with music. (See Physical Exercises.)
 8. National Rhythm Work:

Indians paddling canoes or scouting through forest.

Dutch children clattering along in wooden shoes.

Italians playing hurdy-gurdy or using tambourine.

Japanese in the garden running with short steps.

Spanish using castanets.

IV. SIMPLE STEPS AND HOW TO TEACH THEM.

A. Touch Step:

1. Raise the left foot forward and touch the floor with the toes.
2. Place the left foot on the floor.
3. Place the right foot beside the left. Continue with the right foot. Music: "Blowing Bubbles."

B. Change Step:

1. Step forward with the left foot. 2. Bring the right toe up to the left heel. 3. Step forward with the left foot. Continue with the right foot. Music: "Coming thro' the Rye."

C. Polka Step:

Touch heel in front and toe in back, then 1-2-3 step ("heel, toe, left, right, left"). Continue with the right foot. Music: "Marching thro' Georgia."

V. SINGING AND RING DANCE GAMES.

1. Peas Porridge Hot.
2. Looby Loo.
3. King of France.
4. Away to India.
5. Oats, Peas, Beans.

VI. FOLK DANCES.

The following list is one which has been used successfully with Special Class children:

How Do You Do, My Partner?	Swedish Ring Dance.
Chimes of Dunkirk.	Ace of Diamonds.
Danish Dance of Greeting.	Hopp Mor Annika.
Hey Diddle Diddle.	Sailor's Hornpipe.
Children's Polka.	Highland Fling.
Shoemaker's Dance.	Norwegian Mountain March.
I See You.	Minuet.
The Carrousel.	Irish Jig and Irish Lilt.
German Clap Dance.	Csardas.
Hansel and Gretel Dance.	Swedish Klapdans.
Pixie Polka.	Flag Dance.
Reap the Flax.	

English dances, including:

Black Nag.	Butterfly.
Gathering Peas Pods.	Sellinger's Round.
Row Well, Ye Mariners.	Jennie Pluck Pears.
We Won't Go Home Till Morning.	Pop Goes the Weasel.

VII. SOCIAL DANCES.

Social dancing has its place and should not be allowed in playgrounds, school-yards or streets. We follow this line with girls—especially those who frequent or live near dance-halls, and who may have a wrong impression of social dancing.

Waltz.	Polka.
One-step.	Duchess.
Two-step.	Virginia Reel.
Fox Trot.	Quadrille.

VIII. ORIGINAL TYPE LESSONS.

A. Dance of the Brownies (for small children).

Music: "Dance of the Brownies," Oliver Ditson Co.

1. Couples join inside hands. Polka forward (heel, toe, step, step, step) four times, beginning with outside foot. Finish by facing partner.

2. Take half-stooping (or squatting) position. Clap hands once on knees; then once together; then high above heads three times, maintaining strict rhythmical 1, 2, 1 2 3. Dance this figure twice.

IX. BIBLIOGRAPHY.

- | | |
|----------------------------------------------|----------------------------|
| The Folk Dance Book..... | C. Ward-Crampton, M.D. |
| Children's Singing Games..... | Mari R. Hofer |
| Folk Dances..... | Elizabeth Burchenal |
| Indian Dances..... | Thomas Charles Co., N. Y. |
| Folk Dances..... | Mrs. James J. Storrow |
| The Healthful Art of Dancing..... | Luther H. Gulick, M.D. |
| Folk Dances for Young People..... | Cecilia Van Cleve |
| Dance Songs of the Nations..... | Oscar Duryea |
| Gymnastic Dancing..... | Mary Wood Hinman |
| Popular Games and Dances for Little Children | Mari R. Hofer |
| Dances, Drills and Story-Plays..... | Nina B. Lamkin |
| Old Swedish Folk Dances..... | Nils Bergquist |
| Old Familiar Dances with Figures..... | C. Gott |
| The Festival Book..... | Jennette E. C. Lincoln |
| Games and Dance Figures..... | Community Service, Chicago |

MUSIC.

AIM.

To create a love for music.

To develop a sense of rhythm and pitch.

To secure a pleasing singing tone, sweet and full, not harsh and loud.
(This requires drill and practice.)

To develop a taste for the best music.

SUGGESTIONS.

For more advanced pupils the beginnings of notation and of sight reading are very desirable.

Part singing is a means of developing harmony and leads toward concert singing. It has been used in Special Classes with considerable success.

Use piano and graphophone for rhythmic work.

SONG MATERIAL.

A suggestive list of books and songs is given in the bibliography.

METHOD.

Give brief vocal exercises for good tone production—short exercises for the softening of the voice, emphasizing various degrees of tone.

Give much rhythmic drill—the beating of time to music, clapping, marching, etc. When clapping is used the children should emphasize the first beat in each measure. (See Rhythm under Physical Exercises.)

Teach songs by rote. After a very brief introduction to arouse interest and give the setting or the feeling of a new song, present both words and music, singing through one stanza. After this sing one phrase only and teach the children that phrase, then a second and so on, using the words until the music is memorized. Then give drill on the words alone if needed. Proceed in the same way with other stanzas.

Give special attention to children whose sense of pitch and time is defective. Allow them to sing with the others, at times asking them to listen and then try again.

BIBLIOGRAPHY.

The Congdon Music Primer. C. H. Congdon, New York.

The One Hundred and One Best Songs. Published by The Cable Co., Cable Bldg., Chicago.

Songs and Games for Little Ones. Jenks.

The Songs of Father Goose. Geo. M. Hill Co., Chicago and New York.

Fifty Songs for Rote Singing. Davison and Surette.

Art Song Cycles (Books I and II). Published by Otto Miessner, Silver, Burdett & Co.

Songs of Happiness. Words by Carolyn Bailey, music by Mary Behrmann. Published by Milton Bradley Co.

(Especially valuable, as talking machine records of these songs may be obtained.)

THE VICTROLA.

In the modern school a Victrola is a part of the equipment. It is especially valuable in the Special Class room.

Through careful selection of records the child may learn to know and appreciate the best that there is in music.

Besides its aesthetic value it is of much practical help in the teaching of dancing, physical exercises, marching and drills.

As a means of ear-training it is invaluable. Pupils may learn to distinguish the various musical instruments whether played singly or in combinations. The quality of the singing voice and the number of persons singing, whether solo, duet, trio, quartette or chorus, may also be determined.

Memorization of songs and poems is greatly aided by the use of records. Story-telling records afford much pleasure and help to foster the art of story-telling.

The "Bubble Books" (Columbia records) published by Harper and Brothers are especially fine for use in the lower classes.

READING

AIM.

Intelligent interpretation of the printed page.
Pleasure in reading.
Knowledge of the technic of reading.
Correct habits of study and recitation.

MEANS.

Experiences, social life, familiarity with poems, pictures, songs, and nature, reproduction and dramatization to form a foundation upon which reading may be built.

Study of phonics.

Word study.

Phrase recognition.

Exercises to gain distinct enunciation.

Exercises to gain good expression.

AIDS TO GOOD READING—ORAL OR SILENT.

Reproduction.

Dramatization.

Picture study preparatory to reading the text.

Stories and poems read and told by the teacher.

Supplementary reading by the pupil.

Thought at first should be the essential requirement; technic, subordinate. It should be gained by conversation with the teacher, her questions, a rhyme, or a story. As time advances, technic calls for greater consideration.

PHONICS.

There are many ways of teaching phonics. The Aldine Method is very well planned and clearly explained in the teacher's manual, "Learning to Read." The Gordon Method is excellent and accompanied by useful cards and charts. Another very attractive and complete method is the "See and Say Series." The latter carries the child through the first four grades with material that builds a firm foundation for the reading and spelling for these and the following grades.

Rhyming and matching sounds aid ear training. Vocal training follows ear training. The drills in phonics should consist almost invariably of individual recitations, as concert work covers many habits of careless pronunciation. Good articulation and independent power to call new words are the ends gained by a logical study of phonics.

The following is a plan which may be followed after the consonants, short and long vowels and their equivalents, have been learned. Study simple words that are short vowels followed by one consonant. Examples: "on," "it," "at." Short vowels followed by and preceded by one consonant. Examples: "sad," "hat," "can." Short vowels followed by two and pre-

ceded by one consonant. Examples: "hand," "mill," "doll." Short vowels followed by a one consonant blend. Examples: "lash," "wish," "gasp." Short vowels preceded by a two or three consonant blend. Examples: "glad," "scrub," "thrill." Words having long vowels. Study the use of the final "e" (changing short to long vowels) "cap," "cape," "can," "cane." Equivalents of long vowels. Examples: "oa," "ue," "ea." Digraphs. Examples: "oi," "oy." Suffixes "less," "es," "est," "ion," "ous," "ly," "ness." The following phonograms require constant drill.

ou	alk	eu	ar	shr
ow	th	er	aw	scr
oi	wh	ir	augh	spl
oy	ch	or	ough	
au	ew	ur	thr	

The consonants are first taught in a short interesting story. The pupils reproduce the simple story thus giving back the sound. A variety of drills and games aid in memorizing. Many of the devices for word drill may be well adapted to the phonic drills and vice versa. Drills should be given daily. In case of letters having more than one sound (g hard and soft) teach first exclusively that which will occur most frequently in the child's reading.

PHONIC DEVICES.

Special class children are often phonetically deaf and are frequently speech defectives.

The following is a plan used with children of this character. The nineteen elementary sounds are put on the board in circles. These sounds are recited every morning. The consonant sounds are taught in the usual way.

ā	ai ā eigh ay	ee ē ea	ei ī igh	oa ō ow
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ū	aw	au	alk
---	----	----	-----

ă	ě	ĭ	ŏ	ŭ
---	---	---	---	---

ou ow	oi oy	oo	oo	ir } er } ur }
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Drill: Let us push out our circles with "sh"; smoke them out with "p," etc.

Let us smoke them out with "p" and shut them off with "t."

Question: Did any child hear a word?" Write it down.

Use Aldine Phonic Chart. Find the circle the vowel sound goes in and push out and close off. Even the larger children enjoy this as a game.

OTHER DEVICES.

Print and write a sound-symbol on a four-inch square. On the back have the key to the sound. If the children have learned that "m" is the first sound of moon (as in the See and Say Series) have a picture of the moon on the back of the square. When a child finds it difficult to remember the sound, show him the picture of the moon.

Arrange phonic cards (Gordon's) along the blackboard ledge. Have a child pick out "s" or "e" and hold the card as a reward.

Have the printed capital and small letter on one side of a card and the script form on the other side, that the teacher may turn to either form when there is difficulty.

Have each child whisper the sound in the teacher's ear as he reads it from a card, that the teacher may correct any errors of pronunciation.

Hold the cards in plain sight, sound-symbol facing the class. Take cards rapidly, one at a time from the pack, and hold for an instant at the right of the pack, that every pupil may prepare an answer; when the card is placed quickly on the front of the pack, all sound together. One chosen child may answer or different children.

All drills should be rapid and snappy, that the result may be automatic.

Say to the group, "I am thinking of the first sound in moon. What is it?"

Say to the group, "I am thinking of a sound at the beginning of one of today's new words. What do you think it is?"

Let a child act as teacher, having individual children name the sounds as he holds the cards before them.

Ask children to make from a given paragraph, a list of words which begin with the "new" sound, end with it, contain it.

With alphabet tablets have children make lists of simple sounds and phonograms they know.

Let children tell a number of words beginning with a given sound, write them on the board, and have each child pronounce the words.

Ask the pupils to tell all the sounds they have learned. The teacher writes them on the board. Put in lists in order of number of letters they require. Examples: "b," "g," "h," "cl," "fr," "sc," "str," "thr," "spl," etc. This drill aids in ear training and eye training.

Sound a list of words having the children spell the first letter, (r oom) the first two letters, (sm all) the first three letters, (scr atch), etc. Have them spell the final letter (ca t); the last two letters (warm er); the last three (look ing).

Draw outlines of houses on the board—one for each child in the group; put sound or "family" name on the door. Children write words belonging to that family, as "names of the children inside." Examples: "ar" family with "star," "scar," etc., for the children's names.

From a row of phonic cards on the blackboard ledge child selects cards to place in front of families written on the board.

From a pack of phonic cards let a child select sounds, which, when put together, will make a variety of words.

Let pupils make as many familiar words as possible out of several sounds including phonograms, written on the board.

Give each child a white card on which is printed or written the required number of sounds and phonograms. Let them take the cards home to mother to recite them to her. This is an opportunity for the children to get pleasant drill at home. Enlarge the list as new sounds are learned.

METHODS OF TEACHING READING.

There are many excellent methods of teaching reading; each has its particular advantages. It is best to select that which each method offers to meet a particular difficulty or need. It is helpful to follow somewhat the order of some popular primer because the primer guides the teacher in the selection of words. It also paves the way for the reading from books.

Select new words as they appear in the primer you intend to use. As soon as the child has sufficient power to master new words begin to read from books. Be sure to have the unfamiliar words studied long before you take up a reading lesson from the books. Also have a definite preparation to overcome the obstacles of the lesson, that the reading may be as unconscious as possible.

METHODS OF TEACHING READING TO CHILDREN WHO CANNOT APPLY PHONICS.

I. Select a primer. From the first ten pages make a list of object words. Print these words on cards 5×9 . Keep a box of objects illustrating these words.

From the same pages make a list of sight words. Print these on cards and a printed list on the blackboard.

Lesson I. Select three of these words, as: ball, book, doll. Place a ball on the chalk tray. Place the card, "ball" beside it. Have the child spell and pronounce the word many times. Take the card away. Place a book near the ball. Place the card, "book," beside the book. Have the child spell and pronounce book many times. Take the card away and place cards, "ball" and "book" on the table. Ask the child to put the card, "book" near the book, etc. Place doll on the chalk tray and proceed as with "book" and "ball." Add new words in following lessons, but always review previous lessons.

When about twenty object words have been taught, teach a few sight words.

Examples: "I," "and," "the," "a," "see," "have," "is," "are." Print "I see a" on the lower part of the blackboard. Have child place cards under the words until he knows them. Hold doll before the group. What do you see? "I see a doll." Have the printed cards ready and make a sentence with them under the sentence on the blackboard. Allow the child to place the cards until he can make the sentence.

Make many sentences with the cards using "I see a" and the objects words in the list. Later teach "I have a" in the same way.

Print these sentences on long cards and allow the children to read them and pass them to other children.

The group is now ready to read the first part of the primer.

II. Select a picture—for example, a picture of a baby. "What is this?" "A baby." This answer is given by every child to the question, "Can you say 'baby?'" I will make the chalk say "Baby." The printed word is placed on the board using capital letter "B" and small letter "b."

Drill: "Who can see baby?" "I can see baby" develops "I can see." Other words like "mamma," "kitty," "papa," etc., are developed and taught, being substituted in the subject for "I," as "Mamma can see," "Baby can see," "Baby can see mamma." All combinations are taught by the use of pictures when possible. A list of studied words and combinations is kept on the board for frequent drill. Difficult and new combinations and words are printed in colored chalk, or starred. Word drills in the form of games are given frequently for short periods until there is no further need. Then cards or slips with printed sentences containing the words, or combinations, such as, "I have," "I like," "I want," etc., are given out for quick drill. Flash cards with the words or parts of sentences, or combinations, have been found very good. From board and card reading the work proceeds to the primer, and is continued in the same manner up to the Second Reader.

AIDS TO GOOD READING.

To help children keep their places in reading, have each child read one word, one line, or, until he comes to some mark of punctuation. Frequent drills of this sort bring the class to more careful attention to the reading matter.

One child reads a paragraph and another asks him a question to get one idea or the central thought from the paragraph.

Children illustrate a paragraph or a story by original or copied drawings.

Write sentences contained in day's lesson on slips of paper. Let different children read their slips and then exchange. Another time let a child keep as many as he earns by reading.

Before oral reading have a silent study of the sentence or paragraph to be read, unless the lesson is for sight reading alone. In time the children can give the sentences from memory and gain expression.

Ask for an account of the story at the end of the lesson. Bring out the more difficult words just learned and try to use them as well as to have the child use the words in his seat work.

Read certain paragraphs that children may imitate you for expression.

Observe rules of hygiene to keep pupils alert.

Let a child who has been reading stop at the end of a sentence and call another.

Have several children read the same paragraph to see who makes the fewest mistakes.

Let all the boys read a sentence together—all the girls.

Mount interesting clippings; poems or stories on cards and let the pupils read these as an incentive.

Occasionally allow the best readers to correct the poorer ones.

Let the good readers give individual help to the poorer ones in the dressing room. The benefit is mutual.

Have children copy a story they like from their readers.

To have children read until they fail aids in careful reading.

Those who persistently lose their places in reading benefit by cardboard slips which they place under each sentence as it is studied.

On a card have a picture of a scene, an animal or other object. Write a simple interesting story below. The attractive picture with the accompanying story gains attention from the pupils.

Dramatic readers are very helpful.

Frequent drills on selections chosen for oral expression are valuable.

The quick child enjoys the greater freedom of silent reading while the slower child enjoys the privilege of such reading. The ethical gain in silent reading must not be overlooked, for order and quiet are fine habits to acquire.

WORD STUDY.

1. Easy recognition of words composed of simple phonetic elements.
2. Discovery of new words by applying phonetic principles.
3. Common though difficult sight words.
4. Regular drills on common difficult words confused.

DEVICES FOR WORD STUDY.

Draw a ladder and on each rung write a word. Let children climb the ladder. Have two race with pointers to see who climbs to the top first. A failure means a fall and being out of the race.

Place word cards in a circle on the floor, a word for each child; have the children march around the circle; at a given signal the children stand and read the words in front of them.

Cut fruit from paper and after writing a word on each piece, select a child to sell them.

For difficult sight words the following is especially helpful. Give a red card to those children who have mastered a certain number of words. Give a white card when another set has been learned. To those who know the required number, give the final honor—a blue card.

A list of words (perhaps twenty-five) is on the board. "A" closes his eyes while "B" points to a word. When "A" opens his eyes he asks, "Is it mamma?" The children of the group or "B" answer, "No, it is not mamma." Or, "Yes, it is mamma." When "A" guesses correctly he takes "B's" place.

Have a set of pictures which have been used in teaching difficult or new words. Give out the pictures and ask the pupils to place them under the words they represent.

On a good-sized card print all familiar words in squares. Place small squares containing one word, each on top of a similar word on the large square.

Ask a group of children to read the first sentence or paragraph of the day's lesson and write the difficult words on paper. Write the words in lists on the board and see how many the rest of the group know.

Have the children read the words from the board as in a spelling match; he who fails sits down or goes to the end of the line.

Children make the words at their seats with the alphabet tablets and put them into sentences they originate.

Give each child on a piece of paper a difficult word as his own. At times when these words become obstacles in the reading period, let "John" tell his own word, or "Ruth" hers.

Let children take supplementary readers and make lists of familiar words they find. Use them in simple sentences.

Be careful not to use childish devices for the children who, though knowing very few words, yet are older in years and dislike to be treated as little children. The following may help such pupils:

Keep a chart on which to paste "hard" words found at home, each word belonging to the pupil who brought and told it.

Allow two children, one having a red crayon, the other blue, to study together the morning paper underlining words they know or searching for a given word of current interest (Boston, navy, flag).

Babb's Word Builder No. 1 and No. 2 are good aids in word drill.

PHRASE RECOGNITION.

The drills on unfamiliar phrases should aim to gain quick association of form and sound, and quick interpretation of meaning. The drills should be attractive, interesting, and have a definite purpose.

The following phrases require constant drill. Use many of the devices of word drill.

there are—is	of course
there was—were	once upon a time
as long as	as well as
they are—were	at last
	how many

PICTURE STUDY.

Aim: To aid the pupil in interpreting the text.

To satisfy the child's natural interest in pictures.

To stimulate the child that he may wish to read the text.

To overcome "losing the place" in a lesson because of attention being drawn from the text to the unstudied picture.

To appeal to the imagination and aid in reproduction. The teacher at first must guide the pupil's interpretation of the picture from the recitation of isolated details to the intelligent correlation of the details of the picture with the central thought.

SILENT READING.

Silent reading should occupy at least one hour a week. There should be definite periods for it as well as brief moments of such reading during each lesson. Unless this period be for pleasure alone, the amount of reading should be no more than one paragraph at a time until sufficient practice has made it easy for the child to interpret a complete page. The teacher should aim to bring out the central idea of the subject matter by her guiding questions or suggestion.

Write commands or requests on the board or give out cards bearing the same. The children read silently and obey.

ORAL READING.

Oral reading calls for an intelligent interpretation of the subject matter, clear enunciation and distinct articulation. Vital parts of the story should be read by the best readers in order that the interest may guide the children to appreciate the main thought of the lesson.

PICTURE READING.

We read not only printed matter, but expressions on faces, pictures, nature, etc. Before teaching formal reading we should give an abundance

of training in picture reading. Children should draw pictures and interpret them. They should paint and model with plasticene and interpret their efforts. They should have plenty of opportunity for interpretation through various mediums. Thoughts come through experience.

REPRODUCTION.

A reproduction of the central thought in a lesson may be procured by informal conversation between the teacher and the class or by formal topics. There should be definite periods for this part of the reading, as it is one of the best aids to good reading.

DRAMATIZATION.

Dramatization is not mere play, but it is an important factor in the teaching of reading, because it is agreeable and healthful as an exercise of the mind and body.

It is complete, realistic reading.

It is natural to children, but requires thoughtful preparation.

It calls for tactful help and suggestion from the teacher who must lose herself and become one of the players as she shares her enthusiasm in the dramatizing.

Its advantages are: it enables the child to feel as well as to understand the words and ideas he gains in the reading; it prepares the child to read the text with expression.

It should not be carried on or presented as a finished product. Such would spoil the entire spirit of the helpful play, and would shut out the retiring child.

SUPPLEMENTARY READING.

The use of supplementary primers or readers aids silent reading greatly. A library collection suitable for the class should be in every schoolroom to be used at regular periods or at odd moments when a child has finished his work before the others. Such reading does a great deal toward cultivating a love for books.

SUGGESTIONS.

Teachers should remember that some children learn to read just by reading; some learn after words have been told them repeatedly; and there are a rare few who actually never master reading. A teacher should never give up a child as being unable to read until she has used every device and method she knows with resulting failure. "Much easy reading makes reading easy."

Those children who fail to become readers find great comfort and pleasure in looking at picture books with large print. Some such children are able to pick out a word here and a word there enough to make up a story for themselves. The teacher should do her part toward helping by providing an interesting collection of picture books.

ESPECIALLY GOOD READERS AND SETS FOR GRADES I, II, III.

Progressive Road to Reading. Silver Burdett & Co.

Story Hour Readers. Coe and Christie.

Free and Treadwell. Row, Peterson and Co.

Tommy Tinker's Book.

Merry Animal Tales.
Cherry Tree Children.
Wide Awake.
Buckwalter Third.
Robert Louis Stevenson.
Twilight Town.
The Art Literature Series.
The Aldine System.
See and Say Series.
Blaisdell's Child Life. Primer, I, II, III.
Carroll and Brooks. Primer, I, II, III.
Lewis. Story Method of Teaching Reading.

TO READ FOR PLEASURE.

Pilgrim Stories. Pumphrey.
Fables from Afar. Bryce.
Tales of the Ancient Hebrews. Herbet.
Jack the Giant Killer. Lang.
The First Book of Stories. Coe
For the Children's Hour. Bailey.
The Strange Adventures of Billy Trill. Cheevin.
English Fairy Tales. Jacobs.
The Wide World. Lane.
Heart of Oak Books (Book III). Chas. E. Norton.
East o' the Sun and West o' the Moon. G. Thomsen.
A History Reader for Elementary Schools. L. L. W. Wilson.
Fables and Folk Stories. Horace Scudder.
Chinese Fables and Folk Stories, Davis & Chow Leung.
Cinderella. Lang.
Short Stories for Little Folks. Bryce.
That's Why Stories. Bryce.
Sunbonnet Babies. Grover.
Overall Boys. Grover.
Fairy Stories and Fables. Baldwin.
Mother Goose Village. Bigham.
Mother West Wind Stories. Burgess.

SPELLING.

It is best to follow in the main the authorized list provided for the regular grades, making such additions as are demanded by the individual class. When these lists are not obtainable the teacher makes her own list. The following types of words are suggested for use in such a case:

Phonic Words—These are quickly learned.

Social Words—Words pertaining to the child's home and school life.

Personal Words—Words relating to the child's body and personal appearance.

Current Words—Words occurring in "Current Events."

Nature Words—Words suggested by the trees, birds, bees, grains, flowers, etc.

Holiday Words—Words concerning the holidays and festive days of the year.

Manual Words—Names of tools and materials make a list of special interest.

The best results are obtained by having the children work at the black-board.

Placing the spelling words in short live sentences and teaching them as "part of a whole" is an excellent foundation for language work.

In teaching beginners to spell the object or action should be associated with every new word. For study and drill:

Trace words from copies onto paper.

Trace words found about room.

Make words in sand with pebbles, shells, acorns, etc. Match words from box.

Find similar words to sample given, in primer, newspaper, etc.

Perforate copies of words with pin or nail.

Name words, by spelling, from objects, pictures and signs.

Make boats and have spelling words printed on the sails.

Print words with the "Easy Sign Marker" (obtainable at J. E. Hammett's, Boston, Mass.)

Copy.

Spell each word a given number of times.

Write words in the air with finger.

Trace words on the desk with finger.

Erase from a list one word at a time and spell the missing word.

Erase all the words of a list and rewrite the list as completely as possible.

Guess a word from the studied list. "I am thinking of a word. Guess." "Is it f-o-u-r?"

One of a class of objects. "Guess which tool I was using." "Was it the p-l-a-n-e?" "I have a new hair ribbon. Guess the color."

"Is it b-l-u-e?"

A word acted by some child. Others guess by spelling as above

Make words with letters.

Use given words in sentences.

First and last letters of words on the board. Children fill in missing letters, as B . . . n, for Boston.

Contest. Race with cut letters,—to complete a given list in the shortest time,—to make the most words in a given time.

Two lists on the board, words the same, order not the same. Two children race with pointers to find words pronounced or spelled by the teacher.

Lists on cardboard strips on the desks. Children race to cover with pegs the words given by the teacher.

Fill blanks in sentences.

Spelling match.

ALPHABET GAMES.

1. Players are divided into two groups. Groups form lines on either side of room. Two sets of the alphabet are used. Mark the letters with ink or crayons on cards; have one set in black, and one in another color, easily distinguished.

The leader calls a word. Each side builds the word at the end of its line.

Those who have the letter for that word run and stand in place!

The side spelling the word first gets a point.

Play five or ten minutes and give a score.

2. Take several words written on cards, and cut them up into leaders.

Number each word, and have that number on each letter of that word.

Distribute a letter to each child.

Give them 5 or 10 minutes to find their word and to get ready to act it out for the rest to guess.

Intensive teaching of a few words daily accompanied by many devices for drill and review is suggested as a successful means of teaching spelling.

HELPFUL SPELLERS.

Champion Spelling Book, Part one and Part two. Warren E. Hicks.

One Hundred Per Cent Spelling Book. B. Norman Strong.

Dictation Day by Day. First; Second; Third Year. Kate Van Wagenen.

LANGUAGE.

Language is a deep-rooted desire of the human heart and is its greatest means of expression.

In teaching little children, oral language is by far the most important form, and the small class offers a special opportunity in this work. With forty it is much less easy to encourage spontaneity and repress garrulousness than with half that number. Conversation with the teacher on subjects entertaining to the child, and as often as possible introduced by him, offers the best possible occasion for teaching oral language.

Effort should be made to cultivate an agreeable quality of voice. The ordinary schoolroom routine such as politeness, given forms of questions and answers, and formulae used in lessons, gives opportunities for such teaching.

Memorized selections and stories read to the pupils help to increase the vocabulary and fix correct expressions. Stories used by teacher for reproduction are more successful if they contain frequent repetition and a well-defined climax. Children do not object to crudity, but they demand interest.

Correction of errors should be reduced to the minimum, especially with the very young or young-minded. Imitation is a helpful corrector of errors. It is best to have conversation so informal that its purpose as a language lesson is completely hidden from the pupil.

Written language may be argued as unnecessary for the very immature child, but it is so much a part of the life with one's fellows and so greatly adds to self-respect, that it should be encouraged. As a matter of safety, a child should early write his own name and address.

In teaching composition the blackboard is of great assistance. A sentence well formed by the pupil orally, and then written in full view of the class is doubly fixed in the author's mind and makes some impression on the class. In beginning story-writing with immature pupils, remove all difficulties possible by previous class work on sentence formation, and by having lists of words needed in full view. With many children spelling is the greatest stumbling-block in the way of written expression.

Avoid terms with young children. It is easy enough to teach the few forms necessary if we do not require long names with them, *e. g.*, the names of kinds of sentences. The teacher must keep before her the desire to teach clear, simple, orderly expression and let terms and grammatical forms wait till the later intelligence comes to the child's aid.

ORAL LANGUAGE.

I. Aims.

- A. Enlargement of thought.
- B. Ready and exact expression.
- C. Increase of vocabulary.

II. Means.

- A. Informal talks.
- B. Description of pictures and objects.
Material should be:
 - a. Simple.
 - b. Interesting.
 - c. Well known to narrator.
- C. Narration of experience.
- D. Reproduction of stories.
- E. Free dramatization.
- F. Repetition of selections from memory.
- G. Games containing much vocal repetition.
- H. Polite expressions.

WRITTEN LANGUAGE.

I. Aims.

- A. Establishment of correct habits of thought and expression.
- B. Use in after-life.
- C. Encouragement of self-respect.

II. Means.

- A. Correlating with reading and spelling.
- B. Blackboard lessons following oral composition.
- C. Reproduction of stories.
 - 1. Sentence formation.
Kinds.
 - 2. Capitalization and punctuation.
 - 3. Correction of common errors.
 - 4. Headings, margins, etc.
- D. Description of pictures and objects.
- E. Narration of experience.
- F. Letter writing.
- G. Class criticism.
- H. Copying.
- I. Dictation.

III. Exercises, teaching devices, games.

A. For comprehension.

- 1. Sentences containing blanks to be filled, given to class.
List of missing words supplied until pupils can do without.

Type:

(falling, blue, two, dog, ring)

Mary has a ——— dress.

A chicken has ——— feet.

A ——— has four feet.

Did the teacher ——— the bell?

The snow is ——— fast.

- 2. Picture or subject given class. Words needed to write on given subject supplied by pupils and placed on blackboard. Require a given number used in composition.

Type:

My Baby.

good	brother	doll	rides
pretty	cries	pink	plays
sister	drinks	cheeks	carriage
little	milk	brown	mamma
never	blue	can	loves
rattle	eyes	walk	sleeps

(Must use 15 words)

3. Set of stiff cards folded in middle. Inside on left paste picture—on right, list of suggestive words. Use like suggestion above.
4. Dissected sentences (with or without pictures).

Type:

(two, see, basket, I, carrying, can, girls)

I can see two girls carrying a basket.

5. Experience Trips—Visits to places of local and national importance; visits to the zoo, the Art Exhibits, the department stores, the Navy Yard, and to a newspaper plant are suggestive of many broadening experiences.
6. Lessons to enlarge the vocabulary.
Type—Teacher writes on board all the words suggested to the children by an apple, a bird, etc.
7. Guessing riddles, cartoons, conundrums, etc.
8. Making scrapbooks of little stories that have pleased the children.
9. Keeping a diary on the board of what each week has accomplished in their school-life.

B. For correct expression.

1. Sentences containing blanks to be filled with forms often confused, *e. g.*, is—are, they—there, good—well, them—those, there—their, etc.

Types:

(is, are)

The boys —— playing marbles.

Mary and Rose —— not at school.

Where —— my book?

The buttercups —— in bloom.

The bird —— in the nest.

—— the children in the yard?

2. Set of cards containing expressions often contracted.
Contractions to be made by pupil.

Type:

I can not. (I can't.)

You are.

I am. Etc.

3. Language Games—Written by Myra King.

COLLECTIONS OF STORIES FOR CHILDREN.

<i>Title.</i>	<i>Author.</i>
Anderson's Fairy Tales.....	Edited by Jane H. Stickney
Andrew Lang's Fairy Books	
Arabella and Araminta.....	Gertrude Smith
Black Beauty.....	Sewall
Book of Famous Horses	
Children's Book of Christmas Stories.....	{ Asa Don Dickinson and Ada M. Skinner
Fairy Stories and Fables.....	James Baldwin
Fifty Famous Stories Retold.....	James Baldwin
Folklore Stories and Proverbs.....	Sarah E. Wiltse
Grannie's Wonderful Chair.....	Frances Brown
Grimm's Fairy Tales.....	Edited by Sarah E. Wiltse
Heidi.....	Johanna Spyri
Little Lord Fauntleroy	Burnett
Merry Animal Tales.....	Madge A. Bigham
Moni, the Goat Boy.....	Johanna Spyri
More Mother Stories.....	Laura Richards
Mother Stories.....	Laura Richards
Old Mother West wind.....	Thornton W. Burgess
Pilgrim Stories.....	Margaret B. Pumphrey
Pinocchio.....	Every Man's Library
Roggie and Reggie.....	Gertrude Smith
Stories Children Love.....	Charles Welsh
Stories of Great Americans for Little Americans.....	Edward Eggleston
Tales of Mother Goose Village.....	Madge A. Bigham
The Counterpane Fairy	Katherine Pyle
The First Jungle Book	Rudyard Kipling
Uncle Remus.....	Joel Chandler Harris
When Roggie and Reggie Were Five.....	Gertrude Smith
Wizard of Oz	
Wind and the Willows, The	

POEMS.

<i>Title.</i>	<i>Author.</i>
America.....	Samuel Smith
Bed in Summer.....	Robert L. Stevenson
Come Little Leaves.....	George Cooper
Daffodils, The.....	William Wordsworth
Gingham Dog and the Calico Cat, The.....	Eugene Field
Good Night and Good Morning.....	Lord Houghton
How the Leaves Came Down.....	Susan Coolidge
I Knew Him for a Gentleman	
I Love Little Pussy.....	Jane Taylor
It Isn't Raining Rain Today	

<i>Title.</i>	<i>Author.</i>
Lamplighter, The.	Robert L. Stevenson
Land of Counterpane, The.	Robert L. Stevenson
Land of Story Books, The.	Robert L. Stevenson
Little Boy Blue.	Eugene Field
Lost Doll, The.	Charles Kingsley
My Shadow.	Robert L. Stevenson
November.	Alice Cary
October	
O Little Town of Bethlehem.	Phillips Brooks
One, Two, Three.	H. C. Bunner
Our Flag (There are many flags)	
Owl and the Pussy Cat, The.	Edward Lear
Sandpiper, The.	Celia Thaxter
September.	Helen Hunt Jackson
Sweet and Low.	Tennyson
Swing, The.	Robert L. Stevenson
Thanksgiving Day.	Lydia Maria Child
Three Bells, The.	John G. Whittier
Village Blacksmith, The.	Henry W. Longfellow
Visit from St. Nicholas, A.	Clement C. Moore
We Built a Ship Upon the Stairs	Robert L. Stevenson
Where Go the Boats?	Robert L. Stevenson
Why Do Bells of Christmas Ring?	Eugene Field
Wind, The	Christina Rossetti
Wynken, Blynken, and Nod.	Eugene Field
Year's at the Spring, The.	Robert Browning

Bibliography.

Three Years with the Poets.	Bertha Hazard
Robert Louis Stevenson Reader.	Boyce & Spaulding
Heart of Oak Books.	Charles Eliot Norton

MANNERS AND SOCIAL REACTIONS.

FOR THE TEACHER.

"Character teaches over our head."

"Iron sharpeneth iron; so a man sharpeneth the countenance of his friend."—Proverbs.

True courtesy is evermore a thing of the spirit, to work as leaven, to be gained by inspiration, not to be taught by formal lessons. Let the teacher therefore show unfailing courtesy and a deep and true regard for the personality and possibilities of every child. The keen edge of her sense of fairness and kindness must sharpen these in her pupils. The accepted forms by which courtesy is expressed in society may be taught.

FOR THE CHILD.

"Smiles beget smiles."

"There's nothing so kingly as kindness."

The Golden Rule.

Stories of Knighthood.

The Story of Echo.

Teach or read the following rhyme:

Upon love's shining ring we see
The golden keys of courtesy,—
The fair sweet words that make the way
For entrance to a joyous day.

"*Good morning*" throws the portals wide,
"*Good afternoon*" awaits inside.

"*How do you do?*" when friends are seen,
"*Good-bye*" when leaving them again.

To favors "*Please*" will access find,
"*Thank you*" must follow close behind.

When by mistake some harm is done,
A swift "*Excuse me*" should atone.

For accident or hasty deed,
"*I beg your pardon*" fits the need.

"*Good night*" shall close the doer at last
Upon a day in gladness passed,
If through its hours we've borne in mind
The golden motto, "*Be ye kind.*"

DEVICE FOR IMPRESSING THE ABOVE.

Ring of heavy cardboard gilded and bearing the motto, "Be ye kind." Nine keys about 6" long, also gilded and each one bearing one of the above courteous phrases. Teach the use of these phrases by brief conversational lessons, using the keys to arouse interest and serve as pleasant reminders.

Teach the child:

To use the name of a person addressed.

To look at the person addressed.

Care of Doors:

Opening. Turn the knob before pushing.

Closing. Use the hand which is free on the outer knob and control the door until closed. This needs careful training with little children who, through fear, often seek only to escape the closing door.

Opening for someone whose hands are filled.

Holding for someone coming behind.

To pass others on the right.

To pass behind another if convenient.

To avoid passing between others and the light by which they are working, or between two people who are conversing.

Consideration for others in a crowd:

To give preference to women or elderly people—in entering cars or elevators, in seats, in safer part of sidewalk, in being served at table or at a party.

To shake hands.

To give assistance to a friend, older person or little child in carrying parcels.

Signs of respect, *standing*, or (for boys) lifting cap:

To friends in greeting.

To ladies.

To elders or superiors.

To grief or death.

To Our Country's flag.

To our national song: Star Spangled Banner.

(Sing, or stand in *silence*.)

Welcoming visitors:

Caring for wraps.

Providing a seat.

Passing a book or explaining work.

The treatment of the mistakes of another. Ignore or give kindly aid.

To aid someone unfortunate: a lame or blind person.

To pick up anything dropped. Remain quiet if another has started first.

To hang up fallen wraps in the dressing room.

To return anything found which belongs to another.

To pass pencils, pens, scissors, knives or tools. Give the handle.

The care of public property, buildings or parks.

Conduct at parties, passing refreshments, taking refreshments.

Conduct on cars and trains and when sight-seeing.

Frequent treats, parties, celebrations and trips, should give social opportunities to put into practise these teachings.

PENMANSHIP.

Legibility—chief object.

Sandpaper letters or patterns may be first used to gain idea of form by feeling.

Tracing to fix ideas of form and size.

Following the outlines of letters with meat skewer or pencil.

Where children have difficulty in learning to write it seems advisable to use *any* method to obtain results.

Good healthful positions should be cultivated, but insistence upon certain positions of pen, pencil and paper must be varied somewhat or even omitted, according to the individual child.

Uniformity of movement depends upon the class of children.

Many classes cannot work well in concert.

When possible, teach to criticise own work.

Take and preserve samples of the penmanship of each child every few months that improvement may be noted by child and parent as well as teacher.

Teach child—whenever possible—how to write his or her name and address legibly.

ARITHMETIC.

Methods of teaching arithmetic should vary with the needs of the individual child.

Number work should be related to the child's life and interests.

After number facts have been discovered and developed, using concrete materials, daily, brisk, interesting drills, applied to the child's experience, should be a part of the program. Interest is easily held when drills are in the form of games.

I. LOW GROUP.

The low group is made up of those whose knowledge of number is very limited, faulty or lacking. They are usually the discouraged, neglected ones, who need special attention, stimulation, encouragement, and a variety of materials.

A. Recognition of numbers 1-5.

1. Use paper circles (yellow). Mount.
 - a. One circle—the sun.
 - b. Two—headlights of an automobile.
 - c. Three—tail of a kite.
 - d. Four—custard pies.
 - e. Five—suspended from string, Japanese lanterns.

B. Recognition of numbers 1-10.

1. Use yellow paper squares. Mount in sequence, affixing figures below on mount.
2. Give oblong cardboard with figures pasted 1-10. Have heavy cardboard circles with figures 1-10. Shuffle circles and have children rearrange according to oblong cardboard copy: repeat without the copy.

C. Teach visualizing each number to ten as a separate unit; numbers 10-20 as made up of one, ten, and a number of units.

D. Counting by 2.

1. Have two-inch cards with numbers, 2, 4, 6, 8 to 20 pasted on. Cards may be shuffled and placed on blackboard ledge in sequence by the pupil.
2. Have figures 1, 2, 3, 4, 5 to 20 on cardboard. Encircle even numbers in ring of gold or blue to emphasize idea.
3. Paste on cardboard, pictures arranged in groups of 2, 4, 6, as: 2 kittens, 4 children, 6 cats, 8 trees.

4. Use magazine advertisements that show number facts. Those that have color and action are best.

E. Number facts.

Have ten paper or oak tag envelopes made to represent baskets. Glue these on a heavy mount in two rows of five baskets each. On back of each basket glue a small, narrow pocket, in which a narrow numbered cardboard strip may be inserted.

Have 60 pears, apples or oranges cut from cardboard. Give child numbered strip and have him put that number of fruit in the basket.

Show number 10. Put 10 apples before children. Allow one child to put seven in basket. How many more to make ten? Put answer in opposite basket. Teach addition and subtraction facts objectively.

F. Written expression of number facts discovered by figures and signs, as soon as there is a good foundation.

G. Show three ways of writing a number.

3	1	one.
3 3	2	two.

H. Work with coins.

Days of week.

Pint, quart.

I. Number language: large, small, long, short, more, less, half, quarter.

J. Drill.

Use large cards with question of some number fact on one side and answer on reverse. A child gives answer, and child holding card verifies or corrects it.

Occupations.

Bead stringing with regard to number.

Making checkerboard.

Making border of pegs, lentils, etc. considering number.

II. MIDDLE GROUP.

A. Recognition of numbers 20 to 100 objectively, with bundles of tens.

1. Teach tens.

2. Teach tens and units.

3. Counting by 2-5-10-100 forward and backward, 2-4-6-8, etc., 1-3-5-7, etc., 5-10-15, etc., 6-11-16, etc., 10-20-30, etc., 12-22-32, etc.

4. Odd and even street numbers.

B. Writing numbers 20 to 1000. Teach arrangement in hundreds', tens', and units' columns.

C. Operations with numbers.

1. Oral and written work to fix facts.

Addition in series:

$3+4=7$	$13+4=17$	to $93+4=97$
$5+5=10$	$15+5=20$	to $95+5=100$
$8+7=15$	$18+7=25$	to $98+7=105$

Subtraction corresponding to above.

Drill: Use model store or having none, make lists of goods with prices on boards or charts. Buying, selling, making change, playing conductor, etc. Six-cent fares, eight-cent checks.

Tables 2-5-10-3-4-11-6-8-12-9-7.

Drill: Associate tables with concrete objects. Table 2, ears, wings; Table 3, feet one yard; Table 4, legs of chair; Table 5, nickels; Table 6, legs of fly; Table 7, days in week; Table 8, pints in gallon; Table 9, base-ball nine; Table 10, dimes; Table 11, football eleven; Table 12, dozen.

Ring toss, keeping score, points counting 2-3, etc.

Speed test, time limit. Tables in and out of order.

Clock face—starting inside the circle, starting outside the circle.

Writing tables. Children write a corresponding table with numbers, reversed.

Dominoes, one box for each child. Number of dots on one half multiplied by number of dots on the other.

Division, exact—with remainder.

2. Written work to test knowledge of facts.

Addition, columnal—3 to 6 figures, increasing to 3 digits.

Subtraction—Austrian, including borrowing if learning for the first time.

Multiplication—multiplier not over 2 figures; multiplicand not over 3 figures.

Division—short division, exact and with remainder.

D. Application—mental—linear measure in feet and yards.

Note. Estimate and compare vertical and horizontal distances, doors, windows, etc.

Liquid measures, pints, quarts and gallons.

Dry measures, quarts, pecks and bushels.

Time, telling of time, month, day and hour.

Money, dollar, half-dollar and quarter.

Knowledge of $\frac{1}{2}$ and $\frac{1}{4}$ with objects.

Apply in cost of pint, $\frac{1}{2}$ yard, $\frac{1}{2}$ gallon, $\frac{1}{2}$ hour, $\frac{1}{4}$ hour, $\frac{1}{2}$ year, $\frac{1}{2}$ week, $\frac{1}{2}$ working week, half-price sales of goods in store.

GAMES.

Throwing bean bags in numbered pockets in a board. Keep scores.

Guessing Game.

Teacher thinks of number. Child asks, "Is it $4 \times 4 = 16$?", etc.

Fireman.

Draw ladder. See what child can climb to the top without falling off. Time to see who goes up fastest. Use number facts or single column addition on rungs.

Pussy Wants a Corner.

Number all the children, two having the same number. Child in center calls $4+3$. Children having "7" change places. One in center tries to get a corner.

Ten Pins.

Sides and score.

Ring Toss.

Sides and score.

Selling Papers.

Playing Store.

Simple problems in buying and selling, making change with toy money. Teacher directs pupil to purchase articles and bring back correct change. Pupils at seats work out problem with toy money. Take turns as store-keeper and cashier.

Bill of Fare in a Lunch Room.

Milk 3¢, sandwich, 4¢, cocoa 4¢, soup 6¢, baked beans 5¢, creamed potatoes 5¢. Select food and figure cost. Make change.

III. HIGH GROUP.

A. Writing and reading numbers—1000, etc., U. S. money and Roman numerals.

B. Operations.

Addition, increasing number and size of addends.

Subtraction, increasing number of figures in subtrahend and minuend.

Multiplication, increasing number of figures in multiplicand and multiplier.

Long division. When trial division gives correct quotient figure, when trial figure gives quotient figure too large.

C. Practical application. All problems to be related to child's present or future needs.

Finding cost of various articles used in manual arts: lumber, yarn, cloth and reed.

Finding cost of articles made. Teach $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{2}$ profit.

Number of articles that can be made from a certain amount of material.

Gives recipes (domestic science) to find total cost.

Cost of equipping work-bench—wood working room.

Cost of equipping garden—tools, soil, etc.

Profit and loss in garden vegetables.

Model store—using real money, sales slips, carbon copies, charge slips, making out bills.

Thermometer: Tell temperature of room. Learn freezing and boiling points and temperature of body.

Problem: At five in the morning the temperature was 60° , by 4.00 p. m. it had fallen to 47° . How many degrees difference? When it is 68° in room and 38° outdoors, how much colder is it outdoors?

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Number by Development. Gray.

First Journeys in Numberland. Waldo.

Educative Seat Work. Worst and Keith.

Hammett's Improved Number Cards No. 1, 2, 3, 7 and 8.

The Stone-Millis Arithmetic (Primary) by B. H. Sanborn Co.

(Sheets of Examples) Thompson's Minimum Essentials by Ginn & Co.

Maxson's Self-Keyed Fundamental Number Work.

GEOGRAPHY.

Outdoor lessons on soils, erosion, simple land forms and water forms.

Near-by geography, streets, railroads, important buildings, natural features of special interest.

For location in the city, address envelopes to public buildings, wharves, railroad stations, etc. Children tell how to get to these places.

Stories of different countries. Dramatize. Use plasticene or papier-maché for modeling animals, objects or people. Postage stamps of different countries.

Use plasticene or papier maché for modeling type forms and for making relief maps. See under Modeling.

Sand table.

Product lessons.

Product maps.

Drawing.

Collection of pictures.

Geography quiz. One child stands before the class and invites the others to ask him questions. When he fails to answer, the questioner takes his place provided he can answer his own question.

Cards with well-known geographical names. Give one to each pupil competing. If he can tell of what his card contains the name ("Paris is a city," "Merrimac is a river") he retains the card and receives another. If he cannot tell, he is told and must recite from the same card the next time around. The pupil keeping the most cards wins.

Geography tipover. Alphabet cards plain on one side. Each pupil in turn draws a card without seeing the letter, tells of what it is the name (river, city, street, state), then turns the letter up in full view of all. The pupil who can first name street, state or whatever was asked, beginning with that letter, wins the card.

HISTORY.

Talk about current events—history in the making.

Dramatize stories for each of the following days or months:

October	Columbus
November	Pilgrims
December	Christmas
January	Eskimos
February	Washington and Lincoln
March	Evacuation
April	Patriots' Day
May	Memorial Day
June	Bunker Hill

Make booklets with decorated covers illustrating stories.

Write short compositions.

Collect pictures.

Have in the schoolroom a collection of History stories to which the children may have free access.

Suggested books:

A History Reader For Elementary Schools. Wilson.

Pilgrim Stories. Pumphrey.

Stories of Early American History. Gordy.

Stories of American Discoverers for Little Americans. Rose Lucia.

Lads and Lassie of Other Days. Price.

America's Story for America's Children. Pratt.

HYGIENE.

HYGIENE.

"Plenty of *sunlight* every day,
Plenty of *exercise* in play,
Plenty of *air* that's *fresh* and *sweet*,
Plenty of *wholesome food* to eat,
Plenty of *water* and plenty of *sleep*,
Healthy and strong my body will keep."

Write the above on the board. Underline important words with colored crayon. Pupils read, talk of the meaning, and memorize.

A HEALTH CREED.

To be well I must keep my body, my clothes and my house clean.

I must have plenty of fresh air and sunshine.

I must eat good food and chew it slowly and brush my teeth often.

I must drink a lot of water, milk and cocoa, but no tea or coffee.

I must sit straight and stand straight so as to breath deep and grow up straight and strong.

Early to bed and a long night's sleep will rest my mind and body and keep me from being nervous.

Make charts using the above sentences as headings. Illustrate each with magazine advertisement pictures. This makes a helpful and interesting exercise.

Give simple and practical talks on:

Breathing and ventilation.

Clothing and bathing.

Sleep and exercise.

Food and drink.

Smoking and other hurtful habits.

Care of ears, eyes, skin, hair, teeth and nails.

Treatment of simple cuts, bruises and burns.

Removal of sliver.

Removal of a particle from the eye.

Danger of neglected adenoids and tonsils.

Value of sunlight.

Stress the importance of use of milk, buttermilk, bonnyclabber, malted milk, cocoa and fruit juices in place of even mild stimulants.

Stress the importance of nasal breathing. The effort to hold a slip of thin paper between the lips for a few moments will help some mouth breathers.

Stress the importance of the following habits as having a direct bearing on health:

Wash hands before meals.

Clean teeth before going to bed.

Put handkerchief before face when sneezing or coughing.

Keep hands away from nose, mouth and eyes.

Change wet shoes and stockings.
 Chew food slowly and thoroughly.
 Wash raw fruit before eating.
 Do not exchange partly eaten food or gum.
 Do not drink from a common cup.
 Go to bed early.
 Sit, stand, and walk correctly.
 Read with the light at the side or back.
 Read only with a good light.
 Avoid putting money into mouth.
 Keep food and milk bottles away from flies, especially the baby's bottle.
 Work for a low, pleasing tone of voice.
 Avoid habits of whining and fault finding.

PHYSIOLOGY.

Talk of man and how he differs from other animals:

Physically; in upright position and development of the hand (use of thumb).

Mentally; in development of the reasoning powers and use of articulate speech.

Parts of body: Head, trunk and limbs.

Parts of head: Crown, forehead, nose, chin, two ears, two temples, two eyes, and two cheeks.

Parts of trunk: Two shoulders, two sides, two hips, back, chest, and abdomen.

Parts of upper limbs: Arm, forearm, wrist, hand (back, palm, fingers).

Parts of lower limbs: Thigh, leg, foot (instep, sole, heel, toe, ball).

Teach eyebrows, eyelashes, "bridge" of nose, number and kinds of teeth.

Teach use and care of bones. Speak of deformation caused by bad postures.

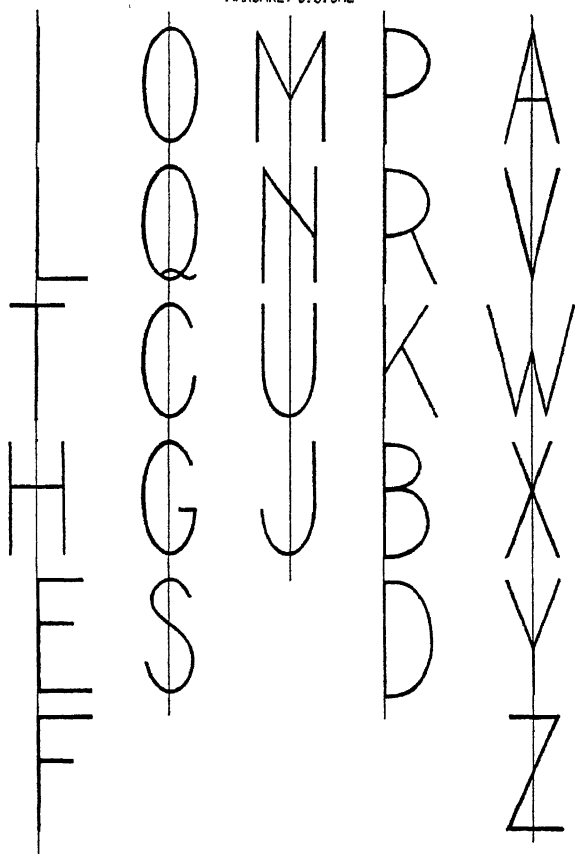
Teach use and care of muscles.

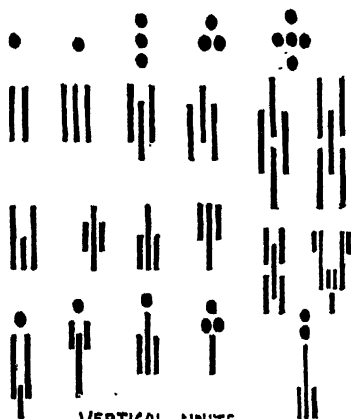
Teach position and importance of the heart, liver, lungs, stomach, intestines—all as parts of the "House Beautiful" with its "windows," "telephones," "kitchen," "chimney," laundry," "engine," "pipes," and "drains."

Valuable booklets on "Health" may be obtained by writing to Dr. Frankel, Metropolitan Life Insurance Building, New York, N. Y.

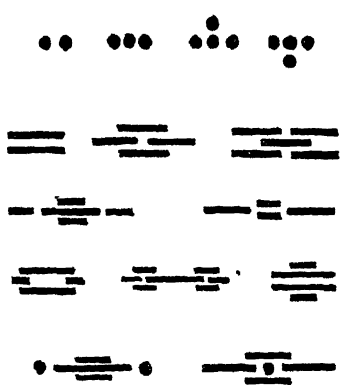
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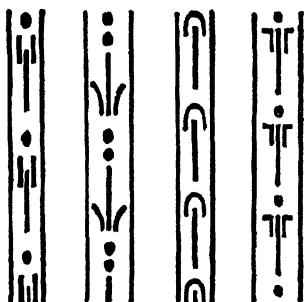




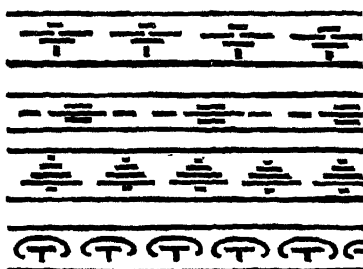
VERTICAL UNITS.



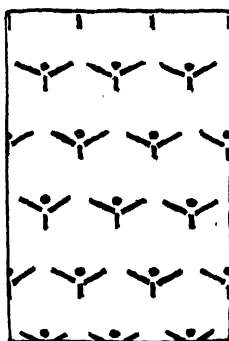
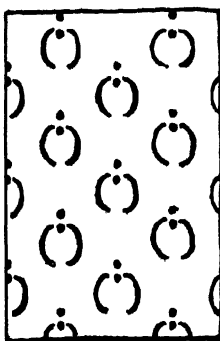
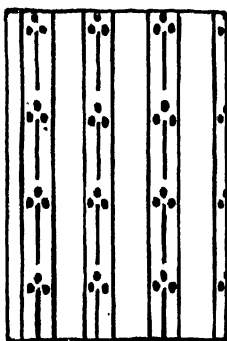
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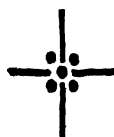
VERTICAL BORDERS.



HORIZONTAL BORDERS.



SURFACE PATTERNS.



ROSETTES.
PLATE II.

DRAWING.

Drawing should be treated as a natural method of self-expression. Many ideas which we try to express by speech and by writing can be much better expressed more definitely and more clearly, by drawing and painting.

Many special class pupils, because of their vivid mental pictures show great facility in drawing. Such pupils should be encouraged to use every opportunity to exercise this talent without adverse criticism. It will be the duty of the teacher to suggest the subjects to be thought about and described; to help the pupils in the comparison, criticism and judgment of their own performances; and, finally, to grade the work done.

In suggesting subjects to be thought about and described by the pupils, the teacher must be specific and particular; definite images suggested before the pupils proceed to draw and color the subject.

If they are drawing pictures let each one be held up and discussed by the class. In what respects is it a true picture? What mistakes, if any, have been made? What changes or corrections should be made? Has anything been left out that is natural and proper to the picture as a whole?

When the pictures have been considered and criticised, they should be put up to be considered together, with a view to making a comparison and selecting the best. The children must be encouraged to make comparisons and pass judgments. The teacher should assist them, declaring her own judgment at the end of the lesson. It is always the best that gives the standard.

It is important that the children should see a great many photographs and pictures, for by this means their visual experience and knowledge may be definitely increased, particularly if they make drawings from the pictures that interest and please them.

Pupils should be shown examples of good design in drawings and paintings, in textiles, pottery and porcelain, in wood or stone carvings and in metal work.

The subject of drawing divides itself into headings: Representation and Design.

REPRESENTATION.

Aim.—To develop power of telling true stories by means of pictures.

To increase the child's facility of expression in terms of lines and colors.

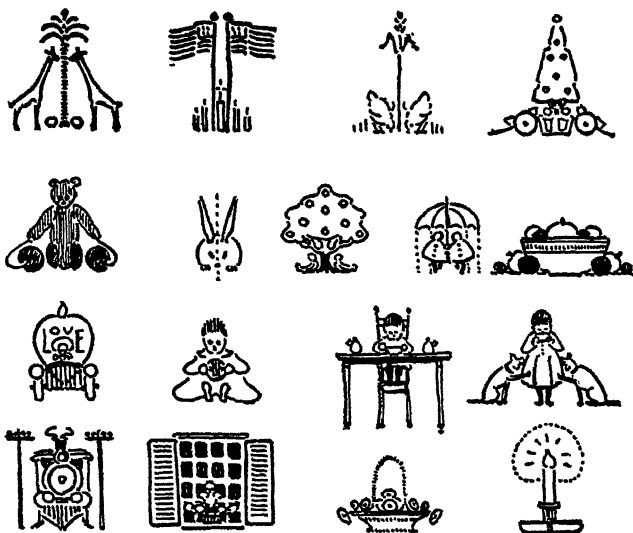
Means.—Making pictures in color to illustrate experiences and interests of the children.

Suggestions.—Letter name of picture and name of child on back of each paper.

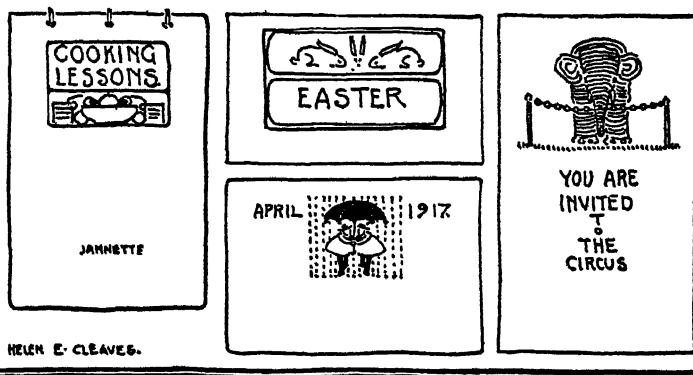
Draw free hand frame line allowing margin on each paper.

LESSONS.

Draw people.—Plate IV. Study shape of head, position of eyes, nose, mouth, ears, hair, etc. Draw men, women, girls, boys and babies. Compare heights and kinds of dress, color of clothes, hats, etc. Draw people



BALANCED, STORY TELLING UNITS SUGGESTING HOLIDAY CARDS, HEADINGS FOR PAPERS, BOOK COVERS etc. IN WHICH REPETITION IS NOT DESIRABLE.



HELEN E. CLEAVES.

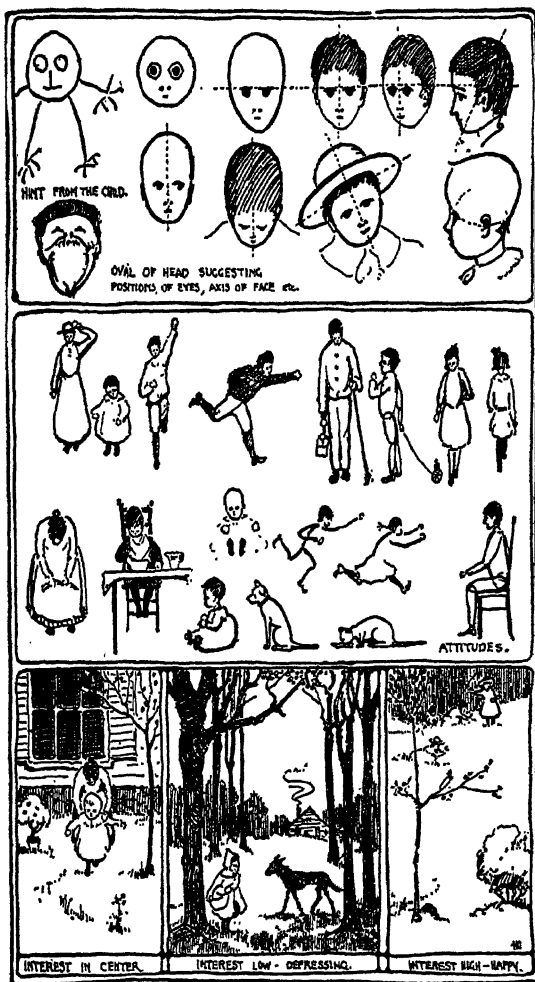


PLATE II.

dressed for work or play or special seasons or occasions. Draw a policeman, fireman, conductor, postman, soldier, sailor, chef, barber, farmer, nurse, housekeeper and make the picture tell who it is. Draw people dressed for football, baseball, running a race, excursion, school, home, party, church. Draw groups of people showing occupations.

Draw tools appropriate to work and play; tools for digging, pounding, cutting, lifting, cleaning, striking ball.

Draw vehicles appropriate to work and pleasure; sliding, carrying, rolling, floating, flying.

Draw buildings appropriate to different uses; home, school, trade, transportation, government, etc.

Draw animals in repose and in action, different fruits, different vegetables and flowers, the various actions of men at work and women at tasks women do, the actions and activities of children and incidents of daily life so far as they are suitable for pictorial representation.

DESIGN.

Aim.—To have the children see and feel the difference between Order and Disorder and to train the sense of Order as a basis for the enjoyment of beauty.

“The beautiful is simply the best of its kind. To recognize and discover it is the chief interest of civilized life.”

To improve the sense of Order and Neatness in all activities, especially in things made with the hands.

Means.—Making orderly arrangements of dots, lines and spots of color by Repetition, Progressions and Balances, known as the three modes of Order.

SUGGESTIONS FOR LESSONS IN THE THREE MODES OF ORDER.

Repetition.—See Plate II. Invent a simple unit with dots or lines, or combinations of dots and lines, and repeat horizontally or vertically to form borders. Repeat to make all-over pattern. Alternate two units in borders or pattern, or alternate colors.

Progressions.—See Plate II. Arrange units and combinations of units, either of form or color, so as to lead the eye from smaller to larger, light to dark, or *visa versa*, or from one position to another.

Balance.—See Plate III. Construct units or arrange in combinations to achieve a feeling of balance on a vertical axis or balance by radiation from a center.

Practice drawing with both hands to get balanced units; a good exercise at blackboard for motor control.

Units or combinations and arrangements of units may, and often do, illustrate all three modes of Order at once.

Symbolic Units.—Plate III. Invent simple, balanced units, drawing center first. By suggesting the color and shape of objects the unit may be made to suggest various interests. Such units become symbolic and may be used as decorations for special booklets, cards, invitations, calendars, book marks and other projects in which an idea may be appropriately emphasized. Such designs should not be repeated as borders or surfaces unless the drawing remains very simple and easy to repeat.

General Suggestions: Letter name and date and allow margin on each paper. Much work should be done at the blackboard or on large pieces of paper pinned to the wall.

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Principles and Practice of Elementary Drawing. Soper.

Simple Pictorial Illustration. Brown.

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MODELING.

"I go so far as to believe that our race owes more of its education to the use of clay than to any other one thing."—Holland.

"Teach the child to see things as they are and not forever as he thinks they ought to be."

In leading children, and especially backward or defective children, to an appreciation of form there is no greater help than modeling.

Modeling gives the child the *feeling* of form because he *makes* the form.

Modeling is a more elementary form of manual training than paper cutting or drawing, because there is greater possibility of modification. By elimination or addition of material there is greater chance for self-correction.

If used freely, modeling will noticeably improve the co-ordination of hand and eye.

MATERIALS.

Clay or plasticene.

NOTE.—The best clay is that used by makers of stone jugs and crocks. Clay, being an entirely mineral substance, affords no food for the growth of bacilli.

Fine moulding boards, brown linoleum or heavy cardboard for covering desks.

NOTE.—Heavy cardboard can be treated to coat of shellac and be quite serviceable.

Roofing slates; excellent to store the plasticene between lessons.

Rolling-pins, for making tiles.

Strips of wood, not too thick, for gauges in rolling out tiles or borders.

Wooden kindergarten knives or modeling tools, meat skewers, toothpicks or sharpened sticks, and wooden clothespins split in two.

SUGGESTIONS.

Meat skewers and kindergarten modeling tools may be used to incise or modify surfaces and to prick around forms.

Toothpicks may be used to strengthen the legs of furniture, animals, trees, etc.

Do not use other materials in combination with clay or plasticene when the modeling material can or will serve the purpose. Let the child use his ingenuity in making detail.

FOR BEGINNING WORK.

Spherical forms. Teach by rolling clay in palms for large sphere, then in left palm using fingers of right hand for smaller ones.

Use spherical forms for eggs, nuts, chickens and most other small animals, insects and a multitude of round objects.

Cylindrical forms. Teach these and the formation of long rolls of uniform size, by rolling clay on a slate with the closed fingers of both hands, gradually separating the fingers while rolling.

Use the above in forming nests, dishes, vases, etc., winding and smoothing as work progresses; also for log cabins, thin tiles, letters, figures, and outlining all forms in relief.

To divide the lump of clay into equal parts: Make a long roll, twist in the middle to divide the lump in halves; twist halves in middle for quarters and so on.

Conical forms. Teach by rolling a sphere, then, using one or two fingers of the right hand, gradually press and roll one side to a point.

Use this form, pressing down the larger mass, for all sepals, petals and conventional flower designs.

CORRELATION.

Modeling may be correlated with nearly every subject likely to be presented to a special class.

With reading and language. Make illustrations of stories or experiences with models of plasticene. Combine other materials such as kindergarten beads, splints or pegs for fences and sprays of pine for trees. Let the children arrange the models on paper or boards to visualize an episode, experience or subject of reading.

Let a class project develop, correlating many subjects, and use as subject for spelling or conversation.

Spelling. Make letters to spell pupils' names, the days of the week, the months, the seasons, towns, or easier words.

Number. Make Arabic figures, Roman numerals, arithmetical signs and simple combinations, using a great variety of small clay-made objects.

Geography. Model sphere and teach planetary form, also hemisphere. Draw form of town, state, country or continent, and transfer same to tiles, adding principal physical features.

Nature work. Teach forms of fruits, leaves, flowers, insects, reptiles, birds and four-footed animals; also vegetables.

Domestic science. Build houses of logs or small clay bricks, and furnish; also arrange on tiles the different rooms in a house with simple furniture, kitchen utensils, etc.

Manual training and drawing. Tools, dishes, vases, vehicles, borders, set designs, conventionalized flowers, etc.

Holidays. Model something appropriate to the day, *e. g.*, Thanksgiving: make fruits, vegetables, pies, cookies, cake, bread, etc.

NOTE.—A game can be made of any of the above suggestions for correlation. The teacher can whisper to each child the name of an object to be modeled in connection with the subject. When finished each child places his model on exhibition and the children then guess what the models are supposed to represent. Suggestions as to what would make a better model or commendation of good work are helpful and more easily received than in a lesson for technique.

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Clay Modeling. Holland.

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(The above books can be procured through The School Arts Magazine or The Davis Press, Worcester, Mass.)

DOMESTIC SCIENCE

FOR SINGLE CLASSES.

Care of corridor and schoolroom.

Use of doormat.

Care of blackboard, erasers, broom, brush and dustpan.

Care of material, cabinets and closets.

Neat and orderly storing. A place for everything and everything in its place. Best methods of taking what is needed, deftly and without waste, and of putting away the remainder. Definite and orderly arrangement of material kept in pupils' desks.

Care of plants, window boxes and flowers.

Pick flowers with long stems. Choose vases of suitable color and shape. Arrange in loose and artistic bouquets. Keep only as long as the appearance is fresh and attractive.

Care of pictures. Hang sufficiently low. Balanced arrangement on screens or walls with ample margins and spacing. Avoid crowded appearance. Put away illustrations for special lessons or days when the occasion is past.

Care of clothing. Cleanliness. Mending. Proper hanging of wraps. Neat adjustment of belts, stockings, ties. When to wear kimono, school dress, party dress, thick clothing, thin clothing, sweater, rubbers, raincoat. Use of napkin, kitchen apron, carpenter's apron, overalls. A good-sized mirror is a valuable addition to the schoolroom equipment.

FOR OLDER GIRLS.

Cookery.

Methods:

1. **Demonstration and Group Work.** Children gather about the table. Discuss the food material to be prepared. Each in turn has a part in the preparation of the food while the others watch closely. The onlookers gain much, especially in the measuring, as they are more keen to note the mistakes of others than their own. There must be constant and long-continued work for accurate measurements. Spare moments are used for drill. This method is used very largely with the lowest class, to quite an extent with the middle class, and in the beginning with the highest class until they become familiar with the uses of the different utensils and materials and gain accuracy in measurements. With each higher class there is more general knowledge of food material, more accuracy and interest. In all the work there must be constant repetition.

2. **Individual Work.** Advance slowly from group work to the simplest individual work. Each girl under close supervision performs all the steps in preparing some dish. Later more responsibility is added. In the highest class work is from recipes. Two girls may work together and carry a recipe through with only a few suggestions. Recipes are given them for home use.

Simple meals are prepared. Anything which may be done on a large scale, as preserving, is successfully accomplished.

Food may be prepared in large quantities to be served at afternoon teas or for food sales.

Type Lesson: (Lowest Class.) Baked apples. Each child washes her own apple, removes the core, measures the sugar, places it in the center, adds the amount of water necessary and has the care of the baking.

Foods Prepared:

- | | |
|-------------------------------|-------------------------------|
| 1. Group Work (Lowest Class) | 2. Individual (Lowest Class) |
| Breakfast Cocoa | Baked Apples |
| Cream of Wheat | Baked Potatoes |
| Stewed Prunes | Plain Toast |
| Boiled Rice | Baked Crackers |
| Milk Toast | Making of Sandwiches |
| Boiled Macaroni | (Additional in Middle Class) |
| Bread Pudding | Stewed Prunes |
| Eggnog | Stewed Apricots |
| Soft Cooked Eggs | Apple Sauce |
| Hard Cooked Eggs | Steamed Rhubarb Sauce |
| Scrambled Eggs | Riced Potatoes |
| Lemon Jelly | Boiled Onions |
| Broiled Meat Cakes | Boiled Carrots |
| Peanut Barley Candy | Cream of Wheat |
| (Additional in Middle Class) | Boiled Rice |
| Mashed Potatoes | Boiled Macaroni |
| Corn Starch Blancmange | Eggnog |
| Creamed Soups | Soft Cooked Eggs |
| Stews (Beef, Lamb) | Hard Cooked Eggs |
| Creamed Codfish | Pan Broiled Chops |
| Bread | Meat Cakes |
| Cake | Lemon Jelly |
| Preserving | Orange Jelly |
| Molasses Candy | (Additional in Highest Class) |
| Chocolate Fudge | Cranberry Sauce |
| Brown Sugar Candy | Mashed Potatoes |
| (Additional in Highest Class) | Boiled Turnips |
| Tapioca Cream | Boiled Parsnips |
| Baked Macaroni with Cheese | Bread Pudding |
| Baked Rice Pudding | Corn Starch Blancmange |
| Baking Powder Biscuits | Rolled Oats |
| Muffins | Gelatin Dishes |
| Ginger Bread | Doughnuts |
| Cookies | Cakes and Icings |
| All Creamed and Scalloped | Pies |
| Dishes | Fancy Biscuits and Rolls |

Voluntary classes in cooking may be formed. Pupils furnish their own materials and take home the finished product.

Housekeeping.

Methods:

1. In the lowest and middle classes housekeeping is not carried on at the same time with cooking, but is made a definite and separate part of the lesson at the beginning or end. Work is done by the children in turn under

very close supervision. Example: Each pupil dusts a part of the room. The pupils vie with each other to see who can collect the most dust on her cloth. One girl washes the dusters.

Later they are assigned to work in groups of two.

2. In the highest class two pupils may be assigned as housekeepers while the remainder of the class cook.

Tasks:

Dusting; washing clothes; sorting dishes; washing, scouring, rinsing, wiping, and putting away dishes; putting cabinets and drawers in order; polishing faucets and stoves; sweeping.

NOTE.—Great care and constant correction are needed to overcome untidy habits if such have been formed.

School Lunches.

In schools where only limited space and small equipment are available, one of the best ways to teach domestic science is by preparing and serving a few wholesome hot dishes for school luncheons. Given one large gas stove, four large double boilers (8 quart cereal kettles), two large bean pots and two large baking pans, it is possible to prepare enough to serve forty pupils with cocoa, and one hot dish such as, soup, stew, chowder, cereal, rice, macaroni, baked potatoes, apples, beans, meat loaf, pudding, scalloped tomatoes, corn, potatoes.

BIBLIOGRAPHY.

Boston Cooking-School Cook Book. Fannie M. Farmer.

Boston Cook Book. Mary J. Lincoln.

Household Science and Arts. Josephine Morris.

GARDENS AND FARM WORK.

AIM.

Appreciation of plant life and animal life, better understanding of the laws of nature, increase of physical vigor, self-respect and productive ability.

SUGGESTIONS.

To have successful gardens near school building the co-operation of the neighborhood and home is essential.

To do school garden work on a farm the interest and co-operation of a farmer is necessary.

Correlation of school garden work with all other school work is of great importance.

Consult seed catalogue for details of planting seeds of any kind. For special instructions about any particular crop write to State Agricultural College or Experiment Station.

NOTE.—A group of fifteen special class boys from Boston has been successfully at work for two seasons, the first season planting two thirds of an acre, the second two acres. They have also cared for chickens, pigs, cows and horses.

School Gardens of three types:

1. Window boxes. Equipment.—Sunny window, box with holes in bottom, rich soil, trowel, watering pot. Plants.—Geraniums, wandering Jew, seedlings in spring (tomatoes, lettuce, asters).

2. Small area near school building. Equipment for class of 15. Six each of spading forks, spades, rakes, hoes and 9 weeders. Commercial "Garden" Fertilizer (100 lbs. to 2500 sq. ft.). Vegetables (best adapted)—Bean, radish, parsnip, carrot, turnip, lettuce, tomato. Raise seedlings of tomatoes and lettuce for home gardens.

3. Large area on a farm. (An acre or more.) Equipment for 15 boys. Fifteen hoes, 6 rakes, 6 spading forks, 6 spades, use of horse and horse cultivator. Vegetables especially adapted to New England. Potatoes, corn (Indian), beans and other vegetables listed under (2).

Raising an acre of potatoes, corn, or beans.

Hire land plowed and harrowed.

Mark with horse marker rows 3 feet apart.

Spread commercial fertilizer 1 ton to acre.

When crop appears cultivate with horse cultivator.

Weed and hoe.

Spray with insecticide.

SEAT WORK.

AIM.

To supplement and reinforce previous teaching.

To provide sense training and encourage the co-ordination of hand and mind.

To develop the creative and constructive ability of the child.

To lay the foundations for self discipline.

To establish correct habits of work.

SUGGESTIONS.

Have the work instructive and interesting.

Plan for the working out of both individual and group projects.

Praise wisely.

Teach care and handling of material.

Use color freely. (Most drawing may well be done with crayons.)

Number sets of seat work so that:

(a) If alike, a child may always use the same one, and be held responsible.

(b) If not alike, a child may get a new one each time until he has gone through the set.

Number pictures or cards to correspond with box or envelope.

Envelopes last much longer if carefully sealed and cut open at the end.

Very large envelopes sealed and cut in two are a good shape.

Patterns, pictures, samples, copy, or directions may be placed on the board or in more permanent form on sets of cards or on the envelope holding material.

Stencils, patterns, or tracing paper may be secured with thumb tacks for children who cannot hold them still.

A low platform is very useful. It may be built of four bushel boxes and covered with oilcloth. Place in a corner, with a low shelf near, for stereoscope, blocks, puzzles, books or games.

Very shallow wooden trays (9 x 12 or 10 x 14 with $\frac{1}{2}$ -inch rim) hold beads, lentils, pegs or tiles conveniently. Work to be done in the tray.

Children may obtain at some stores, the books from which trading stamps have been torn out, with the interleaves, which are excellent for tracing paper, intact.

ARITHMETIC.

Counting.

Place pegs, buttons, shells, acorns, etc., in rows from 1 to 10; 10 to 1, with corresponding figure after each row.

Place pegs to represent soldiers marching by 2's, 4's, 5's, 10's.

Place pegs or colored circles of alternating colors:

(a) Border—a given number of each color, as 4 blue, 4 red, repeat.

(b) Square—4 green for the top and the bottom, 4 red for the sides.

(c) Slanting lines—4 red, 4 blue, repeat.

Envelopes containing the figures from 1 to 10 and pictures showing a definite number of objects. Child arranges the figures in order and places below each a pile of pictures containing that number of objects.

Place groups of dots or stars on paper circles, then sort the circles according to numbers.

Make paper chains using a given number of links of each color. (Use for sash curtains or decorations.)

String beads, a given number of each color or kind.

Outline with lentils:

(a) Figures written on desk.

(b) Number, word, and figure on the same card.

Trace figures.

Trace around geometric forms or outlines of hearts, butterflies, houses, etc. In each outline draw:

(a) A given number of tiny dots, rings, stars or pictures; place corresponding figure below.

(b) Two groups of pictures and express their sum below; as $3+7=10$.

Copy from board or chart a given number of simple pictures: 3 chairs, 3 balls, 3 apples. Place figure after them.

Draw a row of tiny pictures and write the figure beneath.

Draw as above slightly separating into groups of 2 each and write only the even figures. Count by 3's, 4's, etc.

Trace several times around the pattern of a small shoe. Put 5 buttons on each and count by 5's.

Trace pairs of mittens and count by 2's.

Trace houses, add 4 windows and count by 4's.

Quadrille ruled paper. Color a given number of squares, skip one and repeat. Underneath count by the same number, expressing with figures.

Figures, cut from large calendars:

(a) Children place in numerical order on large pieces of drawing paper.

(b) Place to form combinations and write the sum with crayon: $5+4=9$.

Paper 10 x 10 ruled in inch squares:

(a) Place the figures to 100 on the above.

(b) Write the figures to 100 on the same.

(c) Teacher or older pupil write figures in miscellaneous order in the squares. Child draw in each square the number of objects called for.

Follow written directions, such as: draw 9 red apples, 4 yellow stars, etc.

With pegs copy facts shown by lines on the board or work out facts expressed by figures and signs.

Plasticene.

Make a given number of balls.

Make boxes, place a given number of balls in each, or nests with eggs.

Make figures.

Make borders on plasticene background.

Child arranges a sheet of paper to illustrate a certain number. Example: Figure 5 in a circle in the center; groups of 5 pictures above, below and in the corners; 5 blue squares, 5 red apples, 5 oranges, etc.

An oblong drawn to represent two rooms (divided). Suppose 10 people

are sitting in these. Children show by drawing and write all the ways the party could be divided.

Draw lines a given number of inches in length.

Draw lines from 1 to 10 inches in length.

Cut strips of colored paper as above and mount.

Cards similar to the following:

My desk is ——— inches long.

My book is ——— inches wide.

Child copies, uses his ruler, and completes the statement.

Copy drawings of dominoes with only one part filled and supply the missing part to form a given total.

Pieces of cardboard of different sizes. Child traces around each, measures and writes a statement, giving the length and width, or the distance around.

Rule a 1-inch square, a 2-inch square, etc.

Courtis test papers—child writes in the answer.

LETTERS.

Alphabet series. Cards with letter 3 or 4 inches tall and picture of something beginning with that letter. Child outlines both with lentils or pegs.

Cards ruled in squares and containing in every other square the small letters (printed form). Child places beside each letter the one from his letter box that:

(a) Looks just like it.

(b) Is the corresponding capital.

(c) Is the corresponding written form.

Cards as above containing written capitals. Child places printed form for written small letter.

Letters written with wet chalk on the desk. Outline with pegs.

Make letters with plasticene, especially those easily confused, as b and d.

Package of small cards with printed capitals on one side and written form on the other. Order irregular. Child writes from first side and underlines those for which he needed to get help by turning the card.

Envelopes containing letters often placed wrong side up: d, p, n, u, etc. Call attention to "flags" at the *top* of the flag pole and "platforms" at the *bottom* to stand on. Child places all letters right side up.

Trace cardboard letters.

Copy cardboard letters.

Child copies from the board or writes from dictation down the middle of a paper a list of letters. At the left put the letters which precede and at the right those that follow this list.

WRITING.

Children should make constant and free use of the blackboard.

Trace letters, names, words, sentences. (The point of beginning and the direction should be indicated.)

Copy letters, names, words.

Copy name of school, date, sentences, or stories from cards, papers, or blackboard. (To have the copy on a separate slip of paper that it may be moved down and cover the child's own writing, is helpful.)

Write the alphabet.

Written stories cut from "Primary Plans" and mounted. Children trace both the writing and the illustrations.

Short written story. Child illustrates and copies story beneath.

Words or sentences in very coarse print cut from advertising pages of magazines and pasted on sheets of writing paper. Child copies below in script form.

Write stories from reading books.

READING.

Cards with large printed words or sentences. Child outlines with pegs or lentils.

Card containing printed rhyme which is known by the child. He matches with cut-up words.

Cut-up words. Script form in black ink, printed form in red ink. Child matches the two forms.

Envelopes containing pictures and corresponding words. Child matches pictures with words or makes words with printed letters.

Pages of magazines or old readers:

(a) Child underlines words of two or any given number of letters.

(b) Writes a list of them and reads it to the class.

(c) Seeks for some given word, as *of* or *when*, and draws a red ring around each word found.

(d) Seeks for two words often confused, as *of* and *for*, and encircles one with red and the other with blue.

(e) Copies sentences or paragraphs and makes a list of the words not known.

Envelopes containing several small pictures and short stories about each on separate slips of paper. Two children arrange pictures on desk or table. One child reads a story while the other decides under which picture it is to be placed.

Silent reading of story books.

LISTS OF WORDS.

Copy, form with letters, arrange, or write from memory:

(a) Words beginning with a given letter.

(b) Words containing a given sound.

(c) Words of a given number of letters.

(d) Words with a given prefix.

(e) Words with a given ending.

(f) Names of children in the room.

(g) Names of a given class of objects, as animals, toys, colors, things out of doors.

(h) Names of pets.

(i) Alphabetical list of words.

(j) Rhyming words.

(k) Lists of opposites to a given list of words.

(l) Plurals to a given list of nouns.

(m) Arrange all the words of a paragraph or page in lists according to the number of letters in the words, or fold paper in four columns and write in them the two-, three-, four-, and five-letter words from the reading-lesson.

(n) Draw around some simple form and write inside each traced form some word difficult to remember.

Dropped letters. Names of several objects of a class, vowels omitted. Child completes and copies.

Given a list of nouns, write before each an adjective suitable to use with it.

Fruits.

b-n-n-s

-r-ng-s

-ppl-s

p-ch-s

gr-p-s

ch-rr-s

List of adjectives, as soft, warm, dark. Child copies and makes a list of opposites.

Choose a long word like rheumatism. Children make shorter words from its letters. Child with longest list reads to the class or writes the list on the board.

Anagrams.

(a) Letters of a word, disarranged and written inside a square. Children pick out the letters from their letter boxes and form the word.

(b) Two children select words, find the letters, disarrange and exchange.

SPELLING.

Make words with cut letters.

Use words in sentences—no two sentences to begin with same word as: I, See, There.

Rule three columns on large sheets of grey paper; paste picture at top of each column. Beneath, with letters, make words describing picture, or select words from board if unable to spell.

Look up words in dictionary.

Typewriter for older pupils.

Blackboard copying.

SENTENCE CONSTRUCTION.

A picture and envelope of cut-up words related to it. Child makes original sentence.

Questions written. Child writes answers.

Statements written. Child writes questions about them.

Phrases written. From these child completes sentences.

Large pictures in sight. Child writes questions or statements about them.

Sentences about the days, months or seasons.

Words of a sentence scattered on the board. Child studies out and writes the complete sentence.

Divide lined brown paper in divisions by folding. Write a sentence, with words mixed, in each division.

Child writes sentences in correct form on other side.

Envelope or box containing cut sentences. (Do not divide phrases.) Each sentence begins with the same words and these opening words are written on the box.

Common beginnings:

How many ———.

There are ———.

Could you ———.

Child arranges the sentences.

List of rhyming words and sentences from which the same words are omitted. Child copies and supplies the missing word from the list. Later with only one key-word to aid him, and later with no list or aid.

Sample list: ring, sing, king, bring.

Simple type of sentence: That bird has a broken ———.

More difficult type of sentence: The ——— wears a gold crown.

DRAWING.

Trace around patterns and color: Birds, fruit, flowers, furniture, bells, stars, trees.

Trace around patterns on blackboard. Fill in with crayon: Animals to form a circus parade.

Color magazine pictures. Cut and mount.

Family groups from fashion papers. Color, cut and mount.

Color between lines of ruled paper. Cut the strips (red, white and blue, suggested.)

Paper folded in small squares. Color to represent oilcloth.

Copy simple drawings. Cup, chair, table, flag. Write the name beneath.

Hectographed outlines of fruits. Color, cut and mount. Fasten together. For a cover, color the words "My Fruit Book."

Make books for phonics, on each page a picture to represent a different sound, as: b-boy; d-dog; f-frog.

Practical Drawing Cards No. 1. Make a dot at each perforation, connect by straight lines, color and cut.

Dotted drawing paper or perforated cardboard. Child copies surface designs, borders, straight line pictures. Later does originals.

Parquetry papers. Children lay and paste designs.

Kindergarten tablets, light and dark. Place to form borders. Trace, color, tie several together to form a book of standard colors.

Tablets as above. Child makes original designs.

Tag stock stencils. A stencil of straight lines may be used by very young children.

Cards with directions for three or four simple pictures. Child draws with crayon.

Sample card:

Draw a boy sliding down hill.

Draw two boys making a snow man.

Draw a boy with a snow shovel.

Draw six boys on a double runner.

Patterns of paper dolls. Arms and legs cut separately to be attached with wire shanks. Draw face, color hair, draw ankle ties. From a pattern cut and design dresses.

With compasses make concentric circles. Color with standard colors in rainbow order.

Tracing paper. Young children can trace, color, cut and mount in blank books, small outline pictures. Older children can trace quite difficult outline pictures and can make copies for the young children at the

same time, by putting a sheet of drawing paper and one of carbon paper beneath the copy. Fasten all four together with paper fasteners.

Print letters, names, signs, tickets, mottoes.

Plasticene. (See Modeling.)

MISCELLANEOUS.

Use parquetry paper for "matrix and form." Child cuts design with sharp-pointed scissors.

Paper chains of one color, alternate colors, rainbow colors.

Weave paper mats.

Knit on toy knitter.

Pegs. Child sorts by color. Lays design or picture from a drawing.

Large cards ruled in six columns and in horizontal spaces three-fourths inch wide. Standard colors and color names in the top space. Box of pegs and slips of tag stock containing the color names. Dictate different arrangements, as: Fill all spaces with pegs. (Red captain wants only red soldiers.) First a peg, then a word; first two pegs, then two words (or three of each); first half of column pegs, last half words; fill all spaces with words.

Child places pegs in outside row of peg-board with a bead on each for a fence. House design inside.

String beads. One by one (same color) or for given number or color combinations. Double stringing. Use two strings. Place an equal number (2 or 3) on each string, then join by putting both strings through the same bead. String macaroni, allspice, rose hips, acorn cups, seeds, horse chestnuts, barberries, cranberries, popcorn.

Puzzles. Unmounted pictures cut. Children arrange and paste. Post-cards cut. Pictures pasted on wood and cut with coping saw.

Copy simple cross-stitch patterns on quadrille-ruled paper; with colored yarn on perforated sewing cards; or by stringing wooden kindergarten beads on double string.

Gummed dots. (Hammett's.)

Scrap-books. Children mount pictures on separate cards and tie together.

Large card divided in twelve spaces with a type form drawn in each, and envelope of small cards with the same. Child matches.

Kindergarten sewing cards. Child outlines with worsted a design drawn on the card or sews from a design drawn on the board.

Sewing cards to correlate with other lessons. Children outline and use in some constructive way, as for needle-book or book mark.

Child sews his name.

Toy telephone. Two children use.

Stereoscope and collection of views. Two children enjoy together.

Packages of picture postcards (classified.)

Kaleidoscope or small microscope.

Blocks. Have a quantity and variety of size and shape. Child follows directions or builds freely.

Ceramic tiles. Designs copied or original.

Children blow bubbles.

Children braid strips of cloth. One child who is expert may assist several.

Children cut rags in small pieces for use in filling cushions.

Definite tasks in the care of the schoolroom.

Children teach each other, read, spell and recite tables to each other.

Given a cushion on a wooden frame one foot square and two inches high, covered with coarse material on either side and filled with sawdust or scraps. Children use pins or brass-headed tacks to make their names, outline pictures of animals, forms, etc., or illustrate number facts.

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PAPER WORK

This work,—giving training to the eye, the hand and the imagination,—develops accuracy, patience, muscular control and visualization.

CUTTING.

Cutting is quite difficult for the young or undeveloped child. At first he does not seem to see even a broad line, and cuts anywhere but upon it.

Begin with broad crayon lines, ruled with the blackboard ruler, on sheets of newspaper. Child must try to make his scissors walk on the line, or track all the way. If they fall off the rail they must get on again as quickly as possible. Cut one-inch strips, then play with them, making pictures of tables, chairs, flagpole, hencoop, house, railroad track, etc. Colored paper makes the work more attractive.

After the child can cut short strips well, give him a four-inch square. Draw lines parallel to each edge and equi-distant from them. Cut out the small square in lower right-hand corner by cutting on the vertical line to a point just beyond the first horizontal, then turn the paper so that said horizontal line becomes vertical and cut on that. Turn the paper to bring each small square in turn into the best position for cutting. Cut off the oblongs left projecting on each side and use all the parts to make borders or life forms. Pasting the forms after cutting gives meaning to the lesson and develops originality and power of invention.

Circular cutting is more difficult than straight line cutting and should not be given until the child has acquired the ability to keep on the line. Cut slowly and watch the railroad track, going only where the track goes: Always keep the scissors open, cutting with part of blades near the handle to avoid angles. Turn the paper with each cut.

Six circles may be painted or cut from colored paper and mounted as balls or balloons. Use the rainbow colors.

The different phases of the moon may be cut from circles. Paint yellow.

After the cutting, paste beauty forms,—border, surface pattern, rosette, or life forms,—kitten, turtle.

Circles and squares, also squares and triangles may be combined to make more elaborate forms.

Cut from magazines, pictures of articles found in the grocery, dry goods, clothing, furniture and drug stores; in the fruit, flower and bake shops. Paste into wrapping paper scrapbooks, appropriately labelled.

In the same way make books of toys, tools, automobiles and personal hygiene, and others showing furnishings for the different rooms in the house.

Cut paper dolls from fashion books to make a family.

"This is the mother good and dear,
This is the father standing near,
This is the brother strong and tall,
This is the sister who plays with her doll,
This is the little one, pet of all,
Oh, see the whole family, great and small."

FREE CUTTING.

Make this simple at first; it will give confidence for more difficult work. Cut straight strips,—sticks of candy, flagpole, soldiers. Cut a cover for the top of the table, a towel or carpet, a washcloth, a picture. Touch the corners to see if they are sharp corners. Add decoration to these models.

Cut pennies, cookies, pies, plates, saucers, oval platters for Thanksgiving turkey. Add decoration. Cut a clock face, a wheel, a moon.

Taking squares, circles, triangles and oblongs as bases, work up more difficult forms of free cutting.

Cut the letters of the alphabet. Spell the names of days of the week, of holidays, of months, of the school.

Cut the figures from 1 to 10.

Illustrate games, baseball, hide-and-go-seek, a snowball fight.

Illustrate stories. Cut people and objects. Paste them on the black-board and add drawing to complete the illustration.

Cut vase forms, vases holding flowers, baskets or flowerpots with plants.

Household pets, occupations, horses or dogs, running, jumping, etc.

WEAVING.

Fan. Kindergarten weaving mat. Weave in one color. Mount on heavy paper. Cut out the fan by a pattern. Split a dowel or piece of reed at one end. Insert the fan.

Basket for fruit. Sheet of paper 9 inches by 12 inches scored like kindergarten mats in which the strips run the short way. Weave the mats with one-inch strips of drawing paper of the same color as the mat. Fold the mat through the middle the long way. Bend the lower folded corners in between the two sides to form a basket flaring at the ends, and paste. Cut two one-inch strips for handles. Divide into three equal parts. Fold the strip over at right angles at the points of division, paste to hold the folding and paste to the basket.

TRANSPARENCIES.

Find a good-sized outline of a simple flower (tulip, narcissus, single daffodil, daisy). Hektograph copies of this on gray drawing paper, also on transparent paper of the same size. On the latter paint the flower with bright colors. On the gray paper cut out the *inside* of the pattern. Do this by pushing the point of the scissors into the middle of a leaf or flower. First cut a hole large enough for free play for the scissors, then cut to the outside edge. Fit the cut out flower space over the painted flower of the transparent paper and paste the sheets together. Place in the lower part of windows behind window boxes. A more pleasing effect is produced by having outlines of the flowers and leaves in different positions.

Butterflies and birds. Draw around a good pattern of a large butterfly. One-fourth inch outside this tracing, draw another line following all the curves of the first line. This gives the shape of the butterfly in double lines. Hektograph on gray drawing paper and transparent paper. On the latter color brilliantly. From the gray paper cut out the inside of the butterfly pattern, being very careful not to cut over the inner line. Fit the two papers together and paste. Cut out around the outside line. Take a piece of No. 5 reed, willow, or stick. Split the end and insert the butterfly. Use in flowerpots or window boxes.

Make the birds in the same way. Choose a shape that will admit of different colorings. Study the many beautiful and wonderful color combinations of birds from charts, pictures or books.

Fish bowl. Fold a piece of gray drawing paper on the long diameter. Cut out the shape of a fish bowl. Use as a pattern to draw the same outline on transparent paper. On this transparent paper paste at the bottom a rock-shaped piece cut from brown paper and some seaweed (green). Trace around patterns of goldfish in different positions, some foreshortened. Color them and paste. Paste the gray paper on a second piece of transparent paper and paste both on the first section. Hang in a window.

Borders. Draw upper and lower strips about one-fourth inch wide and cut out the space between. Between these strips place any simple design, such as diamond shapes, squares, triangles, triangles placed in a position to look like butterflies. Cut these out and place colored tissue paper behind the whole.

Pictures. A great variety may be made. Cut a circle or oblong of transparent paper of the size wanted for the complete picture with frame. For the lower foreground tear in a fairly straight line a piece of blue paper (or white paper tinted blue) long enough to reach across the transparent paper. This represents the ocean. Cut from white paper a little boat with sail. Paste this boat on the blue paper, near the edge of water, having the sail come against the transparent paper. Add a little round moon or a star. Make a frame of dark paper.

Dennison's transparencies. A box contains four subjects with several color combinations for each, frames, gummed hangers, clips, and directions. These are suited to pupils who cut well and with care. They require exact tracing, careful fitting of parts together, neatness, and care in saving each tiny piece of tissue paper.

SILHOUETTES.

White drawing paper 5 inches by 3 inches. Put on a light blue wash. Use a pattern of a sky line (houses, church spire, trees, etc.) cut in one piece. Cut this from black paper or trace and color black. Place at the bottom of the picture. On the blue above place a star. Make variations.

Christmas eve silhouette. Drawing paper 9 inches by 12 inches. Dark blue wash. Black sky line as above. House about 3 inches high and spire of the church much higher. In the sky above the houses, black outline of Santa in his sleigh with reindeer, placed as though sailing through the air, the deer going toward the upper right-hand corner of the paper. Behind the deer nearest the sleigh draw a large round moon, and cut it out that it may look as though the deer were across its face. Prick tiny holes all over the sky. Paste transparent paper on the back of all, coloring yellow the round space behind where the moon was cut out. Hold to the light.

Other silhouettes,—animals in all positions, household pets, occupations.

CREPE PAPER (printed figures).

Butterflies. Cut from sheet very carefully. Measure a light wire from the tip of one wing down to center of body, up to tip of opposite wing: bend where it touches the body and paste to the back of the butterfly. Another butterfly to match or one cut from drawing paper should be pasted on the back. Bend into desired position.

Fairy wands for drills and plays. Wind a light stick with colored tissue paper. Make one large and two small butterflies as above. Wind an eight-inch piece of light wire around a lead pencil to form a light spiral spring. Fasten one end around the body of a butterfly and the other to the end of the stick. Finish the other end of the stick with long streamers as follows. Fold half a sheet of tissue paper to any convenient fold and cut very narrow strips to within two inches of the top. Wind this plain top around the end of the stick and paste.

Birds. Printed sheet of bluebirds. Cut out two birds that are alike but flying in opposite directions. Mount one on drawing paper and cut out, then paste the other on the back. Hang several in the window or suspend by threads from above.

Cut out two birds as before, leaving on a little of the white paper. Paste together except in one place on the back; push cotton inside and fill out the bird as much as possible. Cut out extra wings, wire and fasten to body.

Fall leaves. Printed sheet. Cut out and fasten to bare branches.

Santa Claus. Cut out two, leaving one-fourth inch of white paper all the way around. Measure the distance from the bottom of the boot to the waistline. Cut a piece of heavy wire twice this length plus 6 inches. Cut a rectangle of heavy cardboard 1 inch narrower than Santa's waist and 4 inches long. Fasten the middle of the wire firmly across one end of the cardboard. Paste the two Santa figures together with the wire standard between, having the ends of wire bent and passing down each leg and projecting 1 inch beyond the foot. Paste only at the outside edges and leave a space at one side for stuffing with cotton batting. Stuff out the jacket as round as possible. Close up the side. To trim, paste cotton over the ermine and touch it with ink with a brush. Put on cotton whiskers. To make Santa stand, run the wires projecting from his boots through a large square of cardboard, bend underneath, and fasten.

Thanksgiving turkeys. Follow in general the directions above. Make the claws so that the bird will stand. At paper stores find ideas and patterns for all seasons of the year.

PAPER FLOWERS.

The making of paper flowers gives valuable training in delicacy of touch. Through this work interest in real flowers may be aroused leading to protection of neighbors' gardens, protection of roots of wild flowers when picking them, knowledge of names of flowers and appreciation of color. Have flowers present when possible. Children copy. Make patterns while studying growth, number and shape of parts, etc.

FOLDED CUT-OUTS.

In all folded work it is essential to keep the thumb of the left hand on the folded edge as the model progresses.

The cutting may be free-hand or, if desired, half of a symmetrical pattern may be used, placing the inside edge of this pattern on the folded edge of the paper.

Besides the familiar paper dolls, birds, bird houses, butterflies, Christmas and other trees, flowers and fruit are easily fashioned. Animals, cut on a fold, will stand on four legs. Elephants, pigs, bears, dogs, cats and any other short-necked animal can be made in this way.

CIRCLES OF PAPER DOLLS.

First cut dolls from folded paper making a long line of dolls holding hands. Second lesson,—cut out a large circle from colored paper. Fold it in six equal parts. Cut the dolls from this in the same manner as for the line of dolls. The head may be at center or outer edge. Be sure to have the hands joined. Cut fat dolls, slim dolls, boy dolls, dolls with differently shaped skirts. Paste the opened circles on white paper.

BOOKS.

Peter Rabbit Book. Outline in "Primary Education," 1917. Cut, color, and make into a book.

Mother Goose Book. As above. Outline in "Primary Education," June, 1917.

Book of Winter Fun. Pages made of blue paper. Snow represented by white drawing paper torn as desired for level or rising ground. Represent children rolling large snowball, sliding, dragging sleds, snowballing, skating, making snow man or fort. Cut the snowballs from white paper. Cut out the children and make coats and caps for them; paste on. Place in good positions in the pictures.

Animal Alphabet Book. Hektographed outlines of 25 animals,—alligator, bear, camel, duck, elephant, fox, goat, horse, ibex, jaguar, kangaroo, lion, monkey, nighthawk, ostrich, pig, quail, reindeer, seal, tiger, unicorn, vulture, walrus, yak, zebra. Cut, color and mount. From a sheet containing the alphabet (large and small letters) cut and color the letters and mount each on the page with the animal of whose name it is the initial. The page for X contains only the letter.

SAND TABLE SCENES.

Indian Scene. Tents, canoes, trees, papoose in cradle hanging from tree, lake, dogs, men, men on horseback, rabbits, squaws sitting on ground or standing, tripod with kettle. Make kettle from plasticene, tripod from reeds or sticks, place pieces of reed under kettle as for fire. Indians paddling in canoes. Some canoes out of water. Wigwams.

Japanese Scene. Houses, people, girls with babies on their backs, women in beautiful dresses, temples, lakes, bridges, rocks, trees, jinrikishas with running men. Make cherry blossoms and paste on branches. Use hektographed patterns.

Eskimo Scene. The lake. Use cotton to represent snow. Eskimos, dogs, canoes, igloo, icebergs, sledges, seal, walrus, white bear. Draw a picture of icebergs and setting sun on the blackboard just behind the scene.

Dutch Scene. Houses, windmills, boats, sledges, boys and girls, men and women in native costumes, gardens of tulips, water carrier, cart with milk cans, drawn by dogs; sailboat, ocean (represent by glass), people on the beach sitting, standing, playing.

Home Life. The pupil's home village or section of city. Street cars, buildings, those especially which are historical or beautiful in architecture, people on street, telephone poles and wires.

Occupations. Lumbering, ice cutting, agriculture.

TOY THEATRE.

Similar to the sand table scenes and even more fascinating is the toy theatre.

Make the stage from a large box, such as a hatbox from which the cover and one side have been removed.

Wings can be set along the sides or at the front close to the proscenium, trees of torn paper producing a most beautiful effect. The proscenium or frame of the opening can be made as decorative as is wanted.

Simpler than wings and just as effective, the sides and background can be made of a long piece of paper attached to either side of opening and forming a semicircle around the back. Scenic effects may be suggested on this background.

Place the stage on the window sill and draw the shade down and out to the top front. Stand cards or hang curtains on either side so that the light comes only from overhead.

Paper figures can be arranged on the stage to form tableaux, with silhouette of trees, housetops, or hills behind.

Various lighting effects can be produced by allowing the overhead light to come through different colored tissue papers, or by reflection of high surfaced, colored papers, in midnight blues, morning rose and evening gold, dropped behind the line of silhouette.

POSTERS.

Outlines found in educational magazines. See bibliography. Months of the year. (Use on large mount or as heading for blackboard calendar.) The Goose Girl. Mrs. Hen's Family. Bobbie's Puppies. John and his Pigs. Dorothy's Bunnies. The Snow Man. Polly and the Pumpkins. The Japanese Girl. The Swans. Mother Goose Outlines.

JOINTED CUT-OUTS.

Printed patterns may be bought from school supply houses, or hektographed outlines given the children. Mother Goose people. Teddy bears. Pilgrim man and woman. George Washington. Parts of the body are cut out separately and joined with brass paper fasteners, thus admitting of different positions.

Owl. Hektograph a good sized outline. Color, cut, and mount on a bare twig. Push the twig through the paper behind the claws and out again.

MAY BASKETS.

Use paper folding lessons. Decorate with good designs. Wall paper makes charming May baskets. Cut any good basket form from a flowered paper, the bottom of the basket being placed on a folded edge. The edges are then pasted to form a pocket. In this arrange fruit or flowers also cut from wall paper.

SPRING DECORATIONS.

Apple blossoms. Pink and white tissue paper. Cut two five-petaled flowers, one pink and one white about the diameter of a twenty-five cent piece. These are sewed together and from one to ten such flowers are strung at intervals on one string. These strings are tied to a long string stretched across the room and from it are also hung either birds or butterflies.

Pond lilies and frogs. White and green tissue paper. Cut a six-leaved flower from each. Cut yellow paper into fringe for the center. Sew together. Use with frogs on strings across the room or in a sand table pond. Sunflowers and daisies are well adapted to decorative purposes.

HALLOWE'EN.

Brownie ring. Fold paper several times as for a string of dolls. On outside fold draw a brownie with pointed shoes and cap. Cut out. Color in woody autumn colors. Join in a ring. Cut out and color little pumpkins of suitable size and paste where the hands join.

Stuffed pumpkins. Orange crêpe paper. Cut an oblong. Paste the ends together. Gather one edge together and tie tightly. Turn "wrong-side out." Stuff full with something soft. Gather up the open edge. Shape into a pumpkin. Wind the stem with green paper. Cut a pumpkin "face" from printed crêpe paper and paste on one side.

Pumpkin transparency. Cut pumpkin shape from orange paper. Cut out eyes, nose and mouth as grotesque as desired. Paste black paper behind all and paste on the window pane.

Use pumpkin faces cut from printed crêpe paper in the same way.

Make banners using the Hallowe'en symbols.

Hang about the room silhouettes of cats large and small, owls, bats, and witches.

Candle shade. Square cardboard shade with pumpkin face from printed crêpe paper set in to each of the four sides as a transparency.

CHRISTMAS.

Silhouette of wise men and camel. Make a picture with a large star in the sky.

Table scene with Santa and reindeer.

Poster. Santa and reindeer with large sleigh. Trees and houses in silhouette. Santa riding over the snowy hills. Good patterns may be traced from printed crêpe papers.

Candy boxes. Fold and construct boxes of any good shape and decorate with Christmas symbols.

Stocking box. Cut out a stocking shape planning an extension at the top which shall fold at the back and make a box. Make in several colors to use on Christmas tree.

Book marks. Cut out a narrow strip of paper. Decorate simply and put a star on the lower end. Or—cut a diamond shape, fold in the middle the shorter way and decorate each side.

Candle and holder. Cut candle holder from dark paper, the candle from light colored paper, and flame yellow. Mount. Candle may be cut from sandpaper thus making a match scratcher.

Cut out three green trees exactly alike. Paste left side of each to the right side of the next. This will make a three-sided tree. Insert in the top of a decorated paper box or a tub.

PAPER TEARING.

Tearing has its place in paper work. Begin with simple objects—fruits, tools, cooking utensils.

Make snowflakes by tearing. See bibliography.

PAPER FOLDING.

Create for use. Strive for accuracy. Material—paper squares (6 inches) any color.

Book. Fold once. Make several. Place one within another. Fasten.

Napkin. "Book" fold again folded to make a square. Make several. File. Sort colors.

Wall pocket. "Napkin" fold. Find the free corners. Fold back one. Repeat with larger paper. Hang on wall.

Pocket book or bag. "Wall pocket" fold. Turn over. Fold back one corner.

Soldier cap. "Wall pocket" fold. Turn over. Fold back three corners together. Repeat in newspaper to wear for marching.

Fireman's cap. Make "soldier's cap." Press open bringing together bottom corners, forming a square. Double back one corner. Repeat in newspaper.

Envelope. Fold on each diagonal. Fold corners to center. Write letter and put it in the envelope. Add address. Fasten with gummed disc or seal with wax.

Picture frame. "Envelope" fold. Fold corners back to edges. Paste picture inside.

House. Fold "book." Open. Fold "book" the other way. Fold edges to center making sixteen squares. Open. Repeat "book" fold. Notice long open edge. Fold one corner back to the center line on the open edge. Press down the resulting triangular pocket for one end of roof. Turn over. Fold top corner square on its diagonal to complete the roof.

Barn. Repeat "house" through the first end of roof. Fold the other end in the same way making barn doors.

Settee or piano. Repeat "barn." Fold the lower center squares to right angles of roof for seat. Fold ends to meet seat.

Dish or table. Fold "book." Open. Fold opposite edges to meet the center crease. Make the same folds in the opposite direction thus forming 16 squares. Fold the diagonals. Strengthen the diagonals of the four corner squares to make dish. Invert for table.

Square tray. Fold 16 squares. Hold folded as for "book" and cut in on one side of the corner squares. Bring one square over the other at each corner and paste.

Basket. Fold 16 squares. Cut off one row and save this strip for handle. Cut in at one side of each corner square, bring over and paste as in tray. Paste handle at middle of longer sides.

Cradle. Proceed as for "basket." From the strip which was cut off cut two rockers, each having one curved edge. Paste one at each end of cradle.

Box. Fold 16 squares. Cut off one row. On each long edge cut in one square on each of the 3 creases. Fold the squares over each other to form cube. Paste or tie with a string.

Chair with rockers. Repeat "box" but when pasting leave one square standing up for back. Paste on rockers cut from the extra strip.

Bureau. Three six-inch squares and one half of a fourth square. From the first square make "tray." Fold each of the other two in 16 squares. Cut off one row. Cut in at one side of each corner square, bring over and paste to form oblong tray. Fit these into the square tray for drawers.

Draw handles with crayon. Paste the one-half square on the back of the bureau having half of it extend above the top for a mirror. Cut shape of mirror as desired. Draw good designs on the bureau.

Salt cellar or May basket. Fold the "book" fold each way. Fold each corner to the center. Turn paper over. Again fold corners to center. Again turn paper over. Strengthen the folds on both diameters by creasing hard. Slip fingers into each of the compartments (under the free squares) and open them out into pockets. Press the fingers together bending the paper back on its two diagonals. This will stand. Fill the pockets with tiny flowers and hang by colored thread from the point in the center.

Beauty forms. Fold "book" each way. Fold each corner to the center. Turn the paper over. Fold each corner to the center. Turn the paper over. Fold back each open corner. If desired fold each corner in again to the crease made by the preceding fold.

Double Rectangle Fold.

Use equal rectangles for a square base; unequal, for oblong or rectangular bases.

Table. Take two equal rectangles. Cross one rectangle over the other in the form of a Greek Cross.

Fold ends of one rectangle over the other and crease. Then fold and crease the remaining two edges in like manner.

Separate the rectangles. Then lay one flat on the desk with ends folded over; after tapering slightly slip end of other rectangle under loose edges; do the same with the other end. This is the basic form.

To make a stool or table slip a paper the width of the square and the desired length through opposite ends. Fold the ends back.

Simple problems based on double rectangle:

1. Muff or napkin ring (basic form).
 2. Stool or table (equal or unequal rectangles).
 3. Chair—straight back—armchair.
 4. Sofa
 5. Bed
- } unequal rectangles.

More complicated forms may be made by using two or more base forms. Example: Bird cage. Use one fold for the floor; the other for the ceiling of cage.

DOLL HOUSE SUGGESTIONS.

House. A large hatbox. Make doors and window holes. Slant roof of stiff cardboard scored in the middle. This gives an upper story for bedroom. Have parlor and dining-room below. Furniture may be made of corners and sides of candy boxes and other small boxes. Fasten pieces together with court plaster or adhesive plaster, or gummed strips saved from flaps of used envelopes. Paper the rooms with wall paper. Draperies of tissue paper or beads. Bedding of tissue paper.

Parlor. Piano (keys drawn on, black keys made with ink), one rocker, other chairs, round top table, rugs (paper weaving), tiny pictures, lamp (picture or otherwise) suspended from ceiling.

Dining-room. Sideboard with drawers, handles and locks drawn on, table, chairs, couch with cover of colored paper, table linen piled in the drawers, tiny dishes cut from drawing paper, centerpiece of cut-work on the

table, bird cage (fine wire and thread) and bird hung in the window, potted plants at windows, pictures of fruit.

Bedroom. Bed, chairs, bureau, closet containing clothes for the family.

Dolls. Any number.

Cat. Changed from room to room.

Barn. Built much like the house. Have a slide door.

Hay. Finely cut tissue paper.

In the stalls animals made of cardboard and colored. Horse, cows, pigs, hens, sheep.

Farmer with three-legged milking stool and milk pail.

Ladder leading to hay mow.

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CARDBOARD CONSTRUCTION.

Cardboard construction like other forms of manual work educates the hand that it may become the servant of the head. Its educational value lies in the skill acquired in handling the various tools and materials and in the knowledge gained. While the value of the article made is not the measure of its educational value, the added interest in a suitable model will repay a careful choice.

MATERIALS.

Pencil, ruler, triangle, compass, crayons or other means of decoration, newsboard, bristol board, wall paper, vellum, eyelet punch and eyelets.

Rectangle.

As much of the work is based on the rectangle, considerable time may be spent in learning its construction. Interest can be held until the child has fully mastered the process if each rectangle is constructed for a special use.

Construction.

On paper or cardboard lay off a base line. Mark the length desired. Place the triangle with its inside edge on the base line, the right angle at the left. Move triangle along base line in this position until the left outside edge of the triangle touches the point laid off on the base line. Draw up from this point on outside edge of triangle. Reverse triangle and repeat on the right point. Compare the distance between the upper ends of these lines with the distance between lower ends on base line. Lay off desired length on vertical lines and connect, completing rectangle.

MODELS.

1. Cards for mounts, programs, spelling and table tests; game scores, rank cards, name and address cards, cardboard rulers, cards for decoration.

2. Tags. Trim outer corners of rectangle as desired. Punch hole for string, using eyelet or a reinforcement of vellum before hole is punched.

3. Circle marker. Construct rectangle of heavy newsboard 6" x $\frac{1}{2}$ ". Draw long diameter. Divide line into half-inches. Punch hole at each dot, using eyelet or vellum reinforcement. Place pin in first hole, pencil point in another, and revolve.

4. Square box. Construct a 5" square of bristol board. Lay off 1" on each corner. Connect by lines parallel to sides and ends of rectangle. Cut out squares in corners. Score. Punch holes and tie. As skill is acquired add laps and paste; add handles and covers. Decorate with crayons or water color.

5. Calendar or picture mount.

1. Materials:

Paste.—Powder or boiled flour.

Note.—Apply paste to newsboard not to vellum. Apply paste to wall paper, not to newsboard.

Newsboard—cut to suit size of picture or calendar.

Coverings—cut 1" longer and wider than newsboard.

Lining—cut $\frac{1}{4}$ " shorter and narrower than newsboard.

2. Drawings—accurate working or free-hand sketches.

3. Arrangement.

Apply paste to cover. Place newsboard in center of cover. Cut cover corners. (See fig. I.) Turn and paste edges. Apply paste to lining

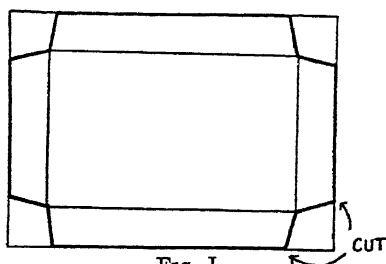


FIG. I.

and place on back. Paste on calendar or picture preferably with widest margin at bottom, narrowest at top, side space wider than top and less than bottom. Eyelet or other arrangement for hanging.

6. Simple booklet:

1. Materials:

Paste.

Cord and needle.

Vellum, 1 piece 7" x 3"; 1 piece $5\frac{1}{4}$ " x 3".

Newsboard, 2 pieces 4" x 6".

Wall paper, 2 pieces $3\frac{1}{4}$ " x 7".

Page paper 8" x $5\frac{1}{4}$ ".

Lining paper $5\frac{1}{4}$ " x $3\frac{1}{8}$ ".

2. Drawings.

3. Arrangement.

Newsboard pasted on vellum 7" x 3" with $\frac{3}{8}$ " space in center between cards. Turn ends of vellum and paste on inside. Paste vellum $5\frac{1}{4}$ " x 3" on inside as lining. Paste wall paper on outside of cover leaving $\frac{1}{4}$ " vellum margin *not* including soft back. Leave margin of paper on other three sides. Cut corners. (See fig. I.) Turn margin and paste. Paste lining, leaving same margin of vellum. Fold page paper through center so that page measures $5\frac{1}{4}$ " x 4". With awl punch three holes in back. Sew from outside through middle hole; back through left end; from outside through middle; out through right end; tie hard knot, then bow if desired. Press under weights.

7. Checker-board.

1. Materials:

Paste.

Newsboard, 2 pieces $7\frac{1}{2}$ " x $3\frac{1}{8}$ ".

Vellum, 1 piece 9" x 9"; 1 piece $7\frac{1}{2}$ " x 2".

$\frac{1}{4}$ " Squared paper.

2. Drawings.

3. Arrangement.

Lay off a 6" square in the middle of a sheet of squared paper. Divide this into eight spaces three squares square (see fig. II), making 64 squares. Color alternate squares. Draw heavy margin line $\frac{1}{2}$ " outside and around 6" square, and another $\frac{1}{4}$ " outside the first. Cut in two pieces (see fig. II), cutting $\frac{1}{8}$ " off long sides.

Mount. Use vellum $7\frac{1}{2}$ " x 2" for joint, leaving $\frac{3}{16}$ " space between cards. Paste newsboard on wrong side of vellum. Trim ends of vellum even with

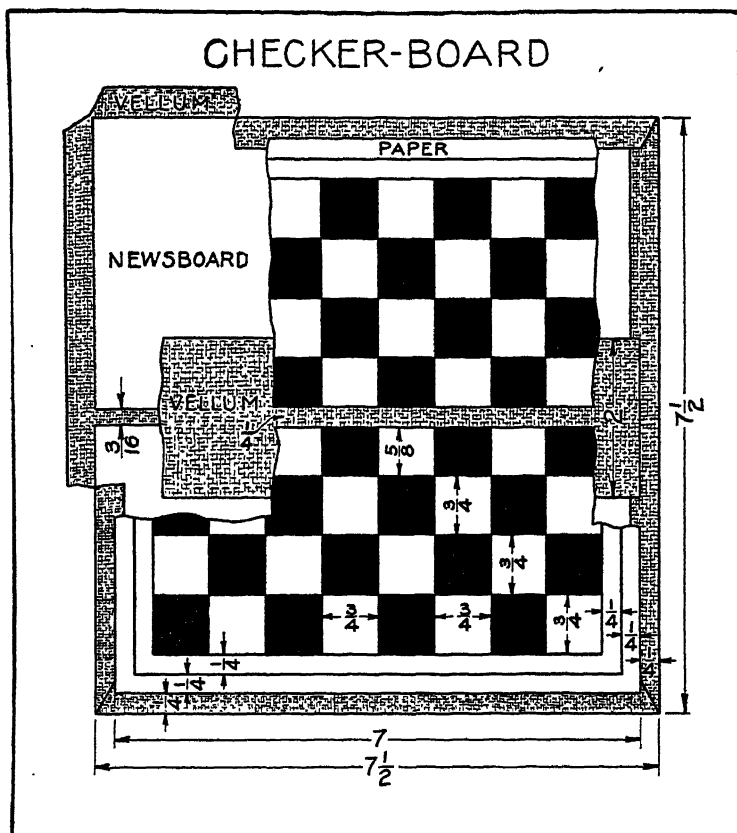


FIG. II.

newsboard. Mount jointed cards on vellum 9" x 9", with joint vellum on top. Cut corners. Turn edges and paste. Mount checker-board. Leave $\frac{3}{16}$ " space between. For young children make mount and checker-board in one piece. Checkers may be made from $\frac{1}{4}$ " dowel painted appropriate colors.

8. File cover.

1. Materials:

Paste.

Newsboard, 2 pieces $9\frac{3}{4}$ " x $4\frac{1}{4}$ ".

Newsboard, 2 pieces $9\frac{1}{2}'' \times \frac{3}{4}''$ for hinge guards.

Vellum, 2 pieces $10\frac{3}{4}'' \times 3\frac{1}{2}''$.

Cover paper, 2 pieces $11'' \times 5''$.

Lining paper, 2 pieces $9\frac{1}{2}'' \times 3\frac{7}{8}''$.

2. Drawings.

3. Arrangement.

Fold vellum on long diameter. Draw line across end $\frac{1}{2}''$ down. Apply paste to one side of guard and paste in place. Apply paste to cover newsboard and place in line with guard and $\frac{1}{8}''$ from it. Clip vellum. (See fig. III.) Fold down laps at top and bottom, and paste. Fold side lap and

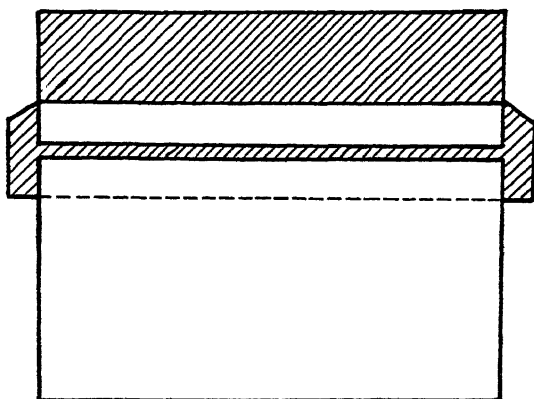


FIG. III.

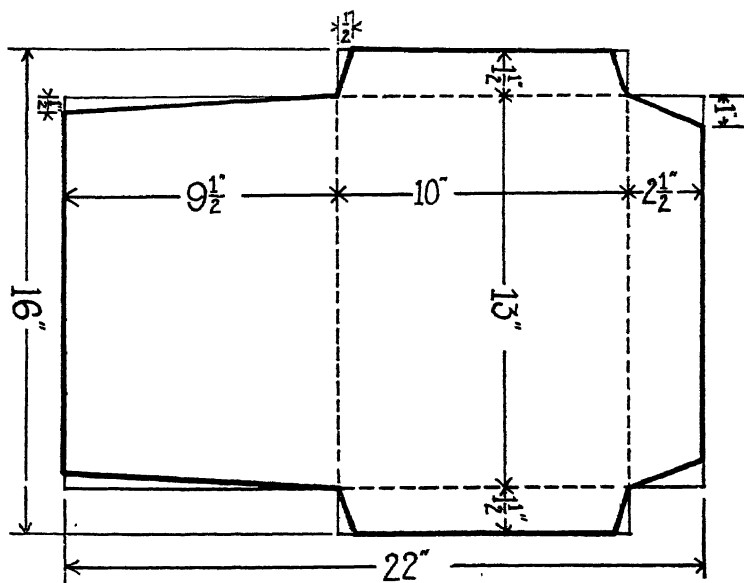


FIG. IV.

paste. Press until dry. Measure, on wrong side of cover, 4" from outer corner top and bottom; mark. Apply paste to entire piece of cover paper. Place cover on top, using marks (4" from corner) as guides. Cut corners; turn laps; paste; line; and press.

9. Portfolio.

1. Material:

Heavy cover paper 22" x 16".

2. Arrangement. (See fig. IV.)

Cut corners. Fold on dotted lines. This may be used to hold materials for articles under construction.

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WEAVING.

AIM.

To develop accuracy, strength, dexterity, observation, concentration, number experience and skill.

To produce articles of use and beauty thus leading toward industrial efficiency.

To arouse appreciation of fabrics.

NOTE.—Weaving has been found to have a quieting effect upon many neurotic children.

SUGGESTIONS.

Teach the names of materials and the vocabulary of weaving, loom, needle, shuttle, heddle, warp, filling, shed.

Warp tightly. Vary the distance of the warp threads from one another according to the fineness or coarseness of the filling.

On the small looms this may be done by skipping nails after some regular plan.

Plan 1. Over one nail, skip none.

Plan 2. Over one nail, skip one.

Plan 3. Over two nails, skip none.

Plan 4. Over two nails, skip one.

Plan 5. Over two nails, skip two.

For beginners, or those who find it very difficult to keep the place, string up a loom with alternate warp threads of different colors.

To fill a shuttle wind not around and around, but under, so as to come up through the opening at both ends, thus describing a figure 8 over the edge. This prevents twisting.

Weaving should progress away from the operator throughout.

Do not draw the filling in tightly. Strive for straight edges.

Insert a new thread by lapping by the one finished, under one warp thread away from either edge. Leave both ends on upper side which is the wrong side when finished.

A shed may be formed by weaving in a wooden ruler or an extra needle and turning it on edge. After passing the shuttle through, turn the ruler down flat and keep it in the work for use each time the filling is to go in that direction.

To finish the weaving with a selvage at the ends, pull the warp thread up and down through the filling till snug.

To finish with fringe, double a few short pieces of filling, put the loop formed down through the loop of warp thread and then put both ends through it, pulling snugly.

Another method. Finish with selvage or hem then use a crochet hook to pull the loop of doubled fringe through the end.

Fringes may be trimmed with a paper cutting machine.

Insist on good color combinations. Use natural for the main color in working with jute.

WEAVES.

(u=under; o=over.)

1. First row—u 1, o 1. Second row—o 1, u 1. Repeat.
2. First row—u 2, o 2. Second row—o 2, u 2. Repeat.
3. First row—u 3, o 3. Second row—o 3, u 3. Repeat.
4. First row—u 1, o 2. Second row—o 2, u 1. Repeat.
5. First row—u 1, o 2. Second row—o 1, u 2. Repeat.
6. First row—u 1, o 3. Second row—o 1, u 3. Repeat.
7. First row—u 2, o 3. Second row—o 2, u 3. Repeat.
8. First row—o 2, u 2. Second row u 1, then like the first row. Third row like first. Fourth row—o 1, u 2, then like first. Repeat the 4 rows.
9. First row—o 1, then u 2, o 2, to end of row. Second row—o 2, u 2. Third row—u 1, then o 2, u 2, to the end. Fourth row—u 2, o 2. Repeat the 4 rows.
10. First row—u 3, o 1. Second row u 2, then o 1, u 1, to the end. Third row like first. Fourth row u 1, then o 1, u 3 to the end. Fifth row o 1, u 1. Sixth row like fourth. Repeat the 6 rows.
11. First row—u 2, o 1. Second row u 1, then o 3, u 3 to the end. Third row like first. Fourth row—o 1, then u 3, o 3, to the end. Repeat the 4 rows.
12. First row—o 3, u 3. Second row—o 1, u 1. Third row like first. Fourth row—u 3, o 3. Fifth row—u 1, o 1. Sixth row like fourth. Repeat the 6 rows.
13. First row—u 2, then o 3, u 3 to the end. Second row—o 1, u 2. Third row like first. Fourth row—u 1, o 2. Fifth row—o 2, then u 3, o 3, to the end. Sixth row like second. Seventh row like fifth. Eighth row like fourth. Repeat the 8 rows.
14. First row—o 2, then u 1, o 3 to the end. Second row—o 1, then u 3, o 5 to the end. Third row—u 2, o 1, u 2, o 3. Fourth row—u 1, then o 3, u 2, o 1, u 2. Fifth row like third. Sixth row like second. Seventh row like first. Eighth row—o 5, u 3. Ninth row like fourth. Tenth row like third. Eleventh row like fourth. Twelfth row like eighth. Repeat the 12 rows.
15. First row—o 2, u 2. Second row—u 1, then o 2, u 2 to the end. Third row like first. Fourth row like second. Fifth row like first. Sixth row—u 3, o 1. Repeat the 6 rows.

MATERIALS AND MODELS.

Hamilton weaving mats. Wooden weavers.

Oilcloth mats, 12 inches square, slits 1 inch apart. Use wooden splints for weavers. (Good for children who have poor control of hands.)

Kindergarten mats of paper. Wide papers for beginners.

1. *Warp of Jute, Woven with Roving.*

Warp by plan 4. Small and large mats, iron holder, doll's rug, marble bag, school bag, doll's hammock.

2. *Warp Thread Woven with Roving.*

Warp by plan 4. Mats or holders. For a thick holder, weave twice as long as desired, double and sew together. One half may be of one color and the other half of another. Form a loop at one corner.

3. *Warp Thread Woven with Jute.*

Warp by plan 3 or 4. Small mats and rugs. Beginners may cut a supply of pieces of jute, six inches longer than the width of the mat, and weave each in separately, leaving an equal amount on each side for fringe.

Bag. Weave mat as above, full size of small loom, finish ends with selvaqe, double and stitch up at the sides. Trim the fringe rather short. Sew on two strong braided handles (12 strands of jute). Leave ends of handle an inch below the sewing to form a tassel. A pleasing effect for surface or border is made by using two colors of jute, weaving with them alternately, once across of each.

Holder. Warp thread woven with strips of calico or gingham 1 inch wide.

4. *Warp Thread Woven with Worsted.*

Doll's hammock. Cardboard loom of the size desired for bed of the hammock. Ratio of length to width about 5 to 3. Sew two brass rings to the middle of back of loom. Tie one end of the warp into a ring and warp back and forth from one ring to the other, the thread passing through the notches at the end and around the front of the loom each time. Weave with Germantown or carpet warp. Weave close to each ring for $\frac{1}{2}$ inch. Weave the face of loom full, cutting off the weaver each time across and leaving a fringe on each side. To take off, cut the rings from the cardboard.

5. *Worsted Warp and Filling.*

Use cardboard looms. A. B. C. looms with directions. Doll's clothing, —tam-o-shanters, stocking caps, skirts, coats, muffs.

Doll's or baby's hood. For a small baby, 8-inch square of heavy cardboard. Letter the sides *a*, *b*, *c*, *d*, *a* to be the front, *b* the top, *c* the back, and *d* the neck. Cut side *c* in a curve to fit the back of the head, out at the middle, in a little at the top and more at the neck. Parallel with, and 1 inch from *b*, pierce a row of holes $\frac{1}{4}$ -inch apart and extending from $1\frac{1}{2}$ inches distant from *a* to $\frac{1}{4}$ inch from *c*. Parallel with *d* do the same. To warp, tie a tight knot in the worsted 5 inches from one end. Sew this short end through a hole at *d* drawing it through to the knot. Sew the other end through the opposite hole at *b* and tie the two ends in a tight hard knot close to the hole at *d*. Tie a bow knot over the hard knot. Loops and ends of this knot 1 inch long form a fringe at the neck on one side. After weaving, tie in a similar fringe on the other half above the knots. Weave closely carrying the worsted on around sides *a* and *c*. The first time around just above the knots, run the needle *through* the warp threads instead of over and under. Start new threads at *a*. When woven full, cut along the edge at *a*, turn and sew back to form a fringe around the face. Tear out the loom. Cut open at the neck between the two rows of knots. Use ribbon or twisted worsted with tassels for strings.

6. *Dexter Cotton.*

Warp and filling each two threads. Warp by plan 3 or 4. Face cloths and kitchen cloths.

Square table mat. Warp and filling as above. Weave over two double threads and under two double threads. After passing the shuttle in one direction, pass it back in the opposite direction through the same shed leaving a $2\frac{1}{2}$ -inch loop at the side to form a fringe. Then weave again,

having rows 3 and 4 together but alternating with 1 and 2. Tie (or sew) the side fringe before cutting from the loom. Cut the warp threads as long as possible, two at a time and tie. Leave those at the four corners until the last. Trim the fringe to a uniform length.

Flat-iron cleaner. Warp with four strands of Dexter cotton. Weave with 1-inch strips of old white cotton cloth.

7. *Raffia Warp and Filling.*

Plaid mat, 8 inches square. Warp with raffia by plan 1. First plan on paper a simple plaid of a few colors. Follow this plan in warping and weaving. Comb the fringe with a metal comb till fine and soft.

Blotter top. Circular cardboard loom. Pass the needle under the warp strand, then take a back stitch over it to give the effect of ribs radiating from a center.

Brush-broom holder. Four-inch Schute weaving mats (round). String with warp thread or *heavy* mercerized cotton. Weave with raffia on one side only. Sew a design over the edge. Fasten two of these together with braided cord and tassels of raffia.

Small semi-circular bag. Warp thread, or macremé cord woven with raffia. Six-inch circle of cardboard. Holes $3\frac{1}{8}$ -inch apart, slightly more than half way around the edge. Five yards of warp thread. Put through the end holes and tie in a firm hard knot 6 inches from one end of thread. Leave this end to begin the weaving later. Thread the long end, sew through the hole equi-distant from the ends, over the thread stretched across the card, back through the hole next the middle one, over the thread stretched across on that side, through the hole next the middle on the other side, over the thread stretched across and so on back and forth from one side of the card to the other till a semicircle is strung. Begin the weaving at the center with the end of warp and weave back and forth about three times, then begin with raffia. Near the outer edge weave a border of a color to match the warp. Weave very full. Tear out the loom. Turn inside out. Sew on two handles of braided raffia.

Round card tray. Six-inch Schute weaving mat. String with warp thread, or cord. Weave with raffia. Around the edge thread in loops 1 inch tall of No. 1 reed by coming up through one hole, twisting over like a letter l and going down through the next hole. Through these loops weave several strands of raffia to match the border, or tie each two loops together with tiny bows of raffia.

Sofa pillow or porch pillow. Weave two large mats. Fasten together by knotting the fringe. Weaving under five and over five and using five strands as a weaver gives a good effect.

8. *Carpet Warp and Cloth Filling*

Large rugs. Carpet warp. Weave with jute or with cotton or woolen strips. Old knitted underwear is easily dyed and makes excellent rugs. Weave three fourths of an inch on each end with warp thread and turn under for a hem.

Large house rugs. Weave about 12 rows with warp thread. After the rug has been woven a short distance, before rolling it up, thread a large darning needle with a very long warp thread and overcast the outside edge. This prevents the warp thread from spreading and slipping down into the fringe.

While weaving, keep the number of rows of colored material used for border written down in order on a piece of paper tacked to the side of loom. When the body of the rug is woven, reverse the order of the colored strips in the border. Finish with the same number of rows of warp as for the beginning. Overcast the edge.

Do not cut off the whole rug at once. Begin at one side. Take a firm hold of the threads, and cut a section not too large to tie in a double knot (being sure to leave long threads on the rug for the fringe). This prevents the warp from drawing back through the reed and also prepares them for the rope which ties to them for rolling the rug over the wheel.

For fringe: Take up a bunch of threads on one side. Divide them. Take outside portion, skip inside portion, and tie in a double knot to the first half of a second bunch. Take the second half of the first portion, skip the second half of the second portion and tie to first half of the third portion. Take second half of second portion, skip second half of third portion and tie to first half of fourth portion. Tie second half of third portion to first half of fifth portion, etc. Have the fringe about three inches long.

Suggestions: Covers for porch pillows, rugs, table cloths, etc., with conventional designs of flowers, trees, houses in the border. Make the pattern for the designs first on squared paper.

KINDERGARTEN BEAD WORK.

Object: To develop power of concentration, number ability, and ability to use hands.

Materials necessary: Kindergarten beads, spheres and cubes, all colors, in large quantities, and cheap corset strings. (These are easier to get through the beads twice.)

Single stringing: This is the ordinary kindergarten stringing, with which all are familiar, using different colors, combining spheres with cubes, and beads with parquetry circles, macaroni, etc.

Double stringing: This may be done with either spheres or cubes, or both. The simplest way is to start with one bead in the center of a lacing, string two beads on one end, and put the other end through the same beads, in opposite direction; pull strings tight, then do the same with one bead, then two, and so on. This may be varied in innumerable ways, and is an excellent drill for counting lessons up to six.

Tile making: This is perhaps the most interesting kind of wooden bead work. It is a development of the double stringing, using the square beads only, and working them into designs. Right here it may well be correlated with drawing and card sewing. The patterns may be made and colored on graph paper, copied in beads or in cross-stitch on the perforated cards. Any simple cross-stitch design may be utilized, using white beads to fill in the blank squares.

The children's initials may easily be worked in a tile with a plain white background, or a color harmonizing with that of the letters. Shields, flags, houses, birds, animals, trees,—in fact, almost anything which can be designed with squares lends itself to this work.

Care must be taken to pull the strings as tight as possible, in order to make a good looking finished piece. If the lacing is not long enough a new one may be sewn on, after cutting off the tips where they are to be joined.

It is best not to use more than fifteen beads in a row, otherwise it is too difficult to manipulate the string.

These beads are excellent for project work. After a number of supervised lessons some children have produced some interesting models, such as bead bags, pendants and chains, baskets, Gloucester hammocks, a doll house and furnishings, and numberless conventional designs.

DIRECTIONS.

Simple Tile. Materials: 5 red cubes, 4 orange cubes, 1 lacing.

To make: Thread one red cube, one orange, one red,—single stringing,—and place them in the center of the lacing. Then double string one orange, one red, one orange, and pull tight, to form the second row. Repeat first row for the third. Tie ends of lacings tight at one side, and cut off superfluous length.

Tree. Materials: 23 green cubes, 9 orange cubes, 1 lacing.

To make: Row 1. Single string one green bead, placing in center of lacing.

Row 2. Double string one green bead, placing under Row 1.

Row 3. Double string three green beads, placing middle one under Rows 1 and 2.

Row 4. Same as Row 3.

Row 5. Same as Row 3.

Row 6. Double string five green beads.

Row 7. Double string seven green beads.

Row 8. Double string one orange bead.

Rows 9, 10, and 11. Same as Row 8, forming trunk, which must be colored brown with crayons.

Row 12. Double string five orange beads, making straight line for base, and color brown.

Tighten, tie ends, and cut off remainder of strings.

Boy Doll. Materials: 4 yellow spheres, 10 orange spheres, 3 orange cubes, 18 blue cubes.

To make: Place one yellow bead in center of string. Double string three orange cubes, having middle one directly under yellow sphere. Pull tight. Double string one orange sphere, placing it under center. Single string two orange spheres on each string, then double string one orange sphere, and pull tight. This forms the face, topped by a hat.

Next, string three blue cubes and one orange sphere on each string, then pass the same string back through the cubes, but not the sphere. These will form the arms, and the strings should not be pulled too tight, or the arms will not dangle.

For the body, double string two blue cubes, and repeat until you have three rows. Pull tight. Double string three yellow spheres to make a belt.

Make legs like arms, by stringing three blue cubes and one orange sphere on each string, passing thread back through cubes.

Finish by threading one end of lacing through the three beads forming the belt, and fasten.

Colors may be changed to suit individual taste.

Girl Doll.

Follow directions for Boy Doll until belt is made. Then double string one row of three cubes, and two rows of four cubes each, to form skirt.

Make legs like those of boy, except that two cubes are used for each instead of three. Fasten ends at bottom of skirt.

BEAD WORK.

Materials: Apache Bead Loom.

Bead Needles. Double Long. Lo Lo Eyes. No. 16.

Kerr's Lustre Twist (white or black), size 00.

Small piece of ooze leather on which to spread the beads while working.

Simple bead work can be done by nearly all children. If a child cannot follow a pattern, start him on weaving without one. Simple patterns will quickly follow.

A warp of six strings gives the best width for children, and it admits of several different designs.

Cut the six strings as long as desired for the finished article with 16 inches extra. Tie these in a slip knot, over the nail in the spool of the loom, allowing a length of 8 inches to hang loose. Put the long nail, provided with the loom, into one of the holes in the side of the spool to hold it. Pass the strings through the teeth of the upper fret, arranging the distance between them according to the size of the beads. Bring the threads down through the teeth of the lower fret, exactly opposite and the same distance apart as through the first fret. Pass the threads down through the peg hole, twisting them several times to insure against their pulling loose; then pull tight and put in the plug.

Tie the weaving thread to the first string on left side of warp. Use a slip knot and leave a long end, as it has to be used later to finish the work. Take five beads up on the needle according as the color comes in the pattern. Pass under the warp; press each bead firmly up between two strings, and keep in place with forefinger of left hand; pull the needle and thread through, taking up all the slack of the thread. Now pass the needle *over* the warp thread back through the beads. Be very careful that the needle does not go *under* or pick up the warp thread. See that each bead has a good-sized hole before using it. A needle is very quickly broken by trying to force it through a small hole. The small-eyed bead must be taken off before proceeding.

When the thread is nearly used up, run it back and forth for two or three rows. Start the new thread on the same row on which the old thread ended, but on the opposite side; weave back again to the place, to proceed with the bead weaving. Always use a very long thread.

To finish a chain: If the chain is to be a continuous one, place it in position end to end, being sure that the design fits together right. Tie the opposite threads in a square knot; or, thread each string into needle and pass the needle along corresponding opposite string, running the needle between each weaving thread, being sure not to pick up the two together. Run the needle back and forth through rows of beads until the thread holds firmly. The outside strings are to be sewn "over and over" the opposite outside warp threads, then run through enough rows of beads to make them firm. This shows why beads with good sized holes must be used.

To make the fringe, string beads on each warp thread, skip the last four or five and run needle back through the others. Fasten the thread firmly up through the chain. Twisting a string of beads makes a pretty fringe.

SATTOIR CHAIN.

Cut 6 strings 47 inches long. Leave a length of 10 inches before tying to the loom. This extra length is to be used later for the medallion and fringe.

If strings of beads are desired for the joining to the medallion, they must be strung first. Put two strings through one needle, making three sets in all. Leave the needles on throughout all of the work. It saves time and patience. The length of the strings of beads will be determined by the pattern. After the beads are strung, separate the six strings over the lower fret, and weave the required section. To keep the strings from tangling, take up one needle at a time and hold by peg until the others are strung. Repeat this process until required length is obtained, which is usually about 27 inches, before putting on the medallion.

To join chain to medallion: Take work off of the loom. Double it, being sure that in the middle it shapes as a collar does around the neck. Fasten this middle point around the nail on the spool. Roll up the work, keeping the two parts somewhat separated, and the ends exactly even. Fasten with pegs.

If the medallion is to have 25 beads, 26 strings are needed. There are already 12 strings on the loom. Cut 7 about 20 inches long. Double each string and fasten to peg on spool. Run the first pair down *side by side*, over the lower fret next to one set of the six strings. Put each extra thread on like this. After the medallion is woven, remove the nail which holds these extra threads, take hold of the two strings which form a pair, and pull them down through until they hold at the top of the woven section.

Put on the fringe in the same manner as for the small chain.

If a bead loom is not obtainable, cut down for about 2 inches the two long sides of a wooden box, preferably a cigar box. This gives room for the hand to move freely. Cut small grooves by running a sharp knife blade back and forth once or twice on the top of the two upstanding ends of box, to hold the strings. Or, take a long piece of wood, and nail a shorter piece about 1½ inches high across each end. Cut a groove across the small pieces of wood and insert metal hair combs.

Suggestions for Bead Work: Bags, chains, cardcases, buckles, purses, headbands for Camp Fire Girls, hat bands, belts, bracelets, ornaments for hats, dress trimmings.

For beads and looms address, Camp Fire Outfitting Co., 197-199 Greene Street, New York City.

For looms, address, Austin Walker Sales Co., Boston, Mass.

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Instruction Books.

"Priscilla Bead Work Book." Priscilla Publishing Co., 85 Broad Street, Boston, Mass.

"Old and New Designs in Bead Work." Book No. 20. By Sophie T. LaCroix.

Priscilla Special Service Sheet, No. 8. Bead Chains. Send two two-cent stamps to Priscilla Publishing Co.

Modern Priscilla Magazine, March, 1920, page 12. Bead Chains.

"Apache Bead Work Instructions and Designs." Austin Walker Sales Co., Boston, Mass.

Modern Priscilla Magazine, April, 1921, page 24. A Home-Made Hand-Loom. Home Loom on which a Woman Can Use Old Bits.

Send self-addressed, stamped envelope, and two two-cent stamps to Needlework Editors, Ladies Home Journal, Independence Square, Philadelphia, Pa., for descriptive pamphlet.

Hardanger. "Hardanger Embroidery, Old and New Designs." By Sophie LaCroix.

CHAIR CANING.

Before beginning to cane a chair it is necessary to know the following facts: The distances between the holes prepared for cane vary from $\frac{1}{2}$ inch center to center to $\frac{3}{4}$ inch. Cane comes in different widths, fine, medium and coarse. Use fine cane for chairs having holes $\frac{1}{2}$ inch from center to center, medium cane if holes are $\frac{3}{8}$ inch and coarse cane if holes are $\frac{3}{4}$ inch. Occasionally a rough strand of cane will be found. Care should be taken to work such strands with grain running in the direction in which work progresses.

Materials for Caning Chair: Bundle of cane, piece of binding, several pegs, an awl and a knife.

DIRECTIONS FOR CANING.

First Step.

Tie one end of a strand of cane by passing it down the center hole of back rail of chair, then circle around inside edge of rail and again down the same hole. Pass the free end of strand across the chair seat, and through the hole in the front rail directly opposite; pull it tight and put in a peg. Pass the cane up through the next hole of the front rail, on either side of center, pass across to the back rail and down the corresponding hole and put in a peg. Continue until all the holes in one half of the back rail are filled. Leave peg in last hole. Now start with a new strand, the second half of first step, beginning at next free hole from center on front rail this time. Continue work until all the holes in this half of back rail are filled. As chair seats are seldom square there will probably be some holes left on front rail. Pass the cane through the next one of these holes to a hole on the side rail, so that the cane will be parallel to the cane already in place. Or, if the cane has ended on the back rail, pass it through a hole on the side rail and across and down through the next unfilled hole in the front rail so that the cane will be parallel to the cane already in place. Continue in this way until all the holes except the corner ones in the front rail are used.

When the end of a length of cane is reached pass it down through the nearest hole and up through the next hole. Then slip it across the rail and push it under the finished work where it will not be seen.

Second Step.

In this step we use the side rails of the chair, starting the cane in the first hole next to any one of the four corner holes. Pass the cane up through the first hole in the side rail, next to any one of the four corner holes. Pass the cane across the chair and down through hole corresponding to the one first used, on opposite rail. Pass the cane up through the next hole and continue as before until all the holes in the side rails are filled. The cane is laid above the first layer of cane, in the same manner. Do not use the corner holes unless the chair seat is more or less round. If so, probably sev-

eral of the holes in the front and back rails may have to be used so as to prevent too big spaces between the cane near the rails.

Now we have finished the first two steps, and the first layer should be lying in a vertical direction. The second layer should be lying above it in a horizontal direction. The work so far has formed squares of cane.

Third Step.

We are now ready for diagonal weaving. Start the weaving from the front right-hand corner. Pass the cane over the horizontal and under the vertical canes,—or to say it another way,—over the canes of the second step and under the canes of the first step, until the end of row is reached. Pass the cane through the hole nearest either the side or the back rail and secure. Now go back to front rail. Pass the long free end of cane down through the corner hole and up through a hole on either the side or front rail and weave again parallel to first row. Pull cane wholly through at end of row. Pass cane down nearest hole and up into next hole. Continue weaving until step is finished.

(In case seat is round, or nearly so, a hole may have to be used twice in order to keep the strands straight.)

Fourth Step.

The fourth step is exactly like the first step. Start at the back rail, after fastening cane. Pass it across the seat and down through the opposite hole on the front rail of chair and continue, following exactly the first step in caning. The cane should be on top of all the other canes.

Fifth Step.

This is a horizontal row. It is woven.

In weaving this step, push the vertical canes, which are lying on top, either to the right or left—whichever seems right. Start the cane from the left-hand side rail if the vertical canes push to the left. Start the cane from the right side rail if vertical canes push to right.

Pass the cane up through the first hole in side rail—over the upper vertical cane and down between and under both the lower vertical cane and the diagonal cane. Then up again and repeat until other side rail is reached. Pull length of cane through, pass it down into hole corresponding to hole started from and up through next hole. In returning the order of weaving is reversed. The weaver will be passed under the lower vertical and diagonal canes, up between and over the upper vertical canes. Sometimes it is best to weave only part of a row at a time and then pull the cane through, as the work may be quite tight, or the weaver may be weak.

Sixth Step.

This step is diagonal weaving. Start at the lower left-hand corner of the chair seat. Pass under the horizontal and over the vertical groups of cane until this step is finished. The seat is now ready for binding.

Binding.

Start a length of binding at one corner of the chair. Lay it along the chair covering the holes. Pass a piece of cane up through the third hole, counting from the corner hole, on either side rail. Pass it across the binding and

down again into the same hole. Continue, using every third hole. If the seat is a square one, start a new piece of binding in each corner. Hold the binding in place at the corners by putting in heavy pieces of reed or small dowels.

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Louise Walker. *Varied Occupations in Weaving*. McMillan Co., London.

John H. Jinks. *Chair Seating with Cane and Raffia*. J. L. Hammett Co.

REED WORK.

“The working hand makes strong the working brain.”

Basketry is one of the oldest of crafts. It was the beginning of all textile work. It may be placed foremost as a means for developing the creative spirit in the child.

MATERIAL.

Reed (rattan with the dry husk removed) is an endogen growing in foreign tropical countries. It twines about trees and hangs from branch to branch. It is sometimes hundreds of feet in length but rarely more than one inch in thickness. For use it is stripped of its bark and leaves and split into round and flat strips of various sizes. The sizes of round reed commonly used, are Nos. 1 to 5. The natural color, or brown and green of the dyed colors, are best.

Tools: cutting pliers, pincers, awl, knife, ruler, deep pail for water.

SUGGESTIONS.

Pull out reeds from the loop end of the twist and make into individual coils. Soak till flexible before using. Warm water soaks the reed more quickly than cold. Too much soaking injures the reed. Coarse reed may be soaked one-half hour; fine reed ten or fifteen minutes. When the reed is to be turned abruptly in process of making the basket, wet it again.

It is well to have the spokes at least two numbers coarser than the weavers, except in small baskets where there may be a difference of one number or none.

Use awl to make an opening for inserting a new spoke if one is broken or to run down between the weaving, to straighten crooked spokes.

Cut the ends of the reed obliquely to avoid splitting. Decide number and size of spokes definitely before beginning a basket, thus avoiding waste and teaching accuracy and forethought.

The child should hold the outside of the basket toward himself with spokes pointing away from him.

The weaving should progress toward the right.

Start a new weaver by crossing it and the finished weaver behind a spoke, lapping about one inch. End and begin weavers on the inside of baskets and outside of trays.

If a spoke breaks, cut it off and insert a new one.

Strive for an even arrangement of spokes and true and even corners.

Press the weaver with the forefinger under and over the spokes as closely as possible.

If one color is desired apply a good wood dye or stain to the finished basket. For color contrasts, dye material before weaving.

Ways of inserting spokes in wooden bases:

Glue them in.

“Hair pin.” Even number of spokes necessary. Insert the spoke down through one hole and up through the next.

Lock. Insert one spoke in each hole and lock underneath; that is, take each spoke in turn and weave behind one, in front of the next, and in.

WEAVING.

Single weave. Odd number of spokes. Over one, under one.

Double weave. As above, using two weavers as one.

Japanese weave. (Even number of spokes not divisible by 3.) Over two single spokes or pairs and under one single spoke or pair. This is excellent for use with the sixteen spokes of the "Indian Center."

Pairing weave. (Odd or even number of spokes.) Insert two weavers separately behind two neighboring spokes. In weaving cross the left weaver over the first spoke, under the next one and out. Take the other weaver and do the same.

Triple twist. Useful to give a firm line at base or border. Insert three weavers separately behind three successive spokes, and beginning with the weaver at the left, bring it in front of two and behind one. Work with each in turn in the same way. If the spokes are of an even number which is divisible by three, go in front of one and behind one at the end of each row to change the order.

Quadruple twist (better known as a coil). Useful at the base of a basket when turning up the spokes to weave the sides. Holding four weavers, cross three spokes instead of two, as in the triple twist.

Indian center and ribbon weave. Divide sixteen spokes into groups of four. Lay the first group vertically on the table, the second horizontally and the third and fourth diagonally, forming a "star." Mark with pencil the exact middle of each spoke as an aid to accuracy. One child may hold while another weaves. With the left hand place a weaver under the group to the left of the vertical. Weave over the vertical set, under the next, and so on four times around. Then take "false weave" by going under *two* groups once, and again go around the center four times. From this point use the Japanese weave.

BORDERS.

1. Back of two spokes and out the first time around, over three and down the second time around. Cut surplus ends.

2. Back of one spoke and out, across one spoke and down, across two spokes and out.

3. Back of two spokes and out, over two and down, over three and down. Press down with the left thumb but keep the thumb on a level with the top.

4. Back of two spokes and out, over three and down, over two and down, over one and down.

5. Bring each spoke over the spoke on the right, back of the next one, over the next, back of the next, over the next, back of the next and out. The first part of the border should be left loose, so that the last spokes may be woven in.

6. Open border. Insert each spoke in front of the next spoke to the left.

7. Taking each spoke in turn, cross on top of the first spoke to the left and insert in front of the second.

8. Taking each spoke in turn cross on top of the first and second spokes to the left and insert in front of the third.

When making an open border, push the spokes at least one inch below the edge.

BASKETS WITH WOODEN BASES.

These bases may be round, oval, square or rectangular, and of many sizes. If rectangular bases are used, always put dowels in the four corners to keep the shape of the basket.

1. Pin tray. Six-inch round base. Twenty-one holes are enough. Eleven-inch spokes (No. 2 or No. 3). Insert and lock. Single weave for one inch. Add border No. 1.

2. Flower basket. Six-inch round base. Twenty-four holes. Twenty-four-inch No. 2 spokes. Insert and "hair pin" With long weavers of No. 1 reed, pair until the basket is three inches in height, trying to obtain a gradual and outward flare. Finish with border No. 6. For the handle two twenty-five-inch pieces of No. 4 reed. Insert them on opposite sides of the basket three inches apart. Weave No. 1 reed over each part of the handle. When approaching the middle, pinch the two handle parts together and weave over both.

3. Oval coaster. Twelve-inch oval wooden base. Ten-inch spokes. Insert and lock. Pair for one inch. Border No. 2.

4. Fruit tray. Eleven-inch round wooden base. Sixteen-inch spokes. Lock. Triple twist for one inch. Border No. 3.

5. More difficult fruit tray. Twelve-inch base. Fifty-six holes. "Hair pin" twenty-eight thirty-six-inch spokes. Have four long weavers ready. Pair for one inch. Border No. 4.

6. Oval serving tray. Twelve- by nineteen-inch oval base. Uneven number of holes. Eighteen-inch spokes. Do triple twist once around beneath the base, and then finish by locking. Triple twist above the base for one inch. Choice of borders 1 to 4. Add reed or brass handles.

Other baskets in this group: a work basket with border No. 5, a waste basket, a window box.

BASKETS WITH "COMMERCIAL" BASES.

Half of the spokes are slit in the middle with a sharp knife. The remainder are pushed through the incisions.

1. Reed table mat. Eight sixteen-inch (No. 2) spokes. Mark the center. Slit one and one-half inches in the middle of four of these spokes. Insert the remaining four in these incisions. Soak for a few minutes. Bind the spokes firmly together with raffia slightly wet, then begin the weaving with it. Over two, under two for one round. Begin the second round with a "false weave" (under four). Weave two more rounds, then single weave for four rounds. False weave at the beginning of each. This transforms the spokes into a "star." Cut one spoke off quite closely and single weave with No. 1 reed. No false weave now needed. Three long weavers will make the mat six inches in diameter. Choice of borders 6 to 8.

Variations: (a) Do not cut the extra spoke and use the pairing weave throughout the weaving. (b) Start the mat with eight sixteen-inch spokes and one nine-inch spoke. No false weaves needed.

2. Whisk-broom holder. Two mats as above fastened together with reed.

3. Flower basket. No. 2 or 3 reed. The above mat as a base. Turn the spokes up abruptly. Weave to hold a pint glass jar. No. 4 reed for a wide flaring handle.
4. Work basket.
5. Fern basket.
6. Waste basket. Mat for base. Turn the spokes up in a gradual flare.

BASKETS WITH WOVEN BASES.

1. Mat or base. Eight sixteen-inch spokes of No. 2 reed. Cross four on top of the remaining four. Hold firmly while starting to weave with a No. 1 weaver. Proceed as in the table mat first described, cutting off the extra spoke after the eighth round. Weave six inches. Add an open border.
2. Cut spokes to suit any desired size of basket. Weave the bottom as above, turn the spokes up at any point, either abruptly or gradually.

BASKETS WOVEN OVER A MOLD.

Suggested molds: olive or pickle bottles (large or small), glass jars, 10 cent glass finger bowls, glass gold fish bowls, blue or brown porcelain dishes, flowerpots, vases or jardinières.

1. Flower basket. Mold: a goldfish bowl. Start with Indian center. No. 2 reed. Thirty-five inch spokes. No. 1 for weavers.

2. Violet bowl. Mold: a 10 cent glass fingerbowl. Start with a woven mat. Eight twenty-five-inch spokes of No. 1 reed. No. 1 weavers. Cut one spoke after the eighth round. Single weave. When the base is the size of the bowl, wet and bend the spokes. Continue weaving, following the shape of the bowl. If the bowl slips a large orange makes a good weight. First round of top—bring spoke 1 behind spoke 2, spoke 2 behind spoke 3, etc. Carry all the spokes down over the outside of the bowl to the outside of the base edge; slip the spokes through two rows of weaving to hold in place and finish by locking. Or, slip the spokes in a little above the base and lock them so that the base of the standard is on a level with the base of the bowl instead of underneath.

When the start is an Indian center, the even number of spokes may be used, they being kept in pairs and the Japanese weave used throughout. For the top, bring spokes 1 and 2 behind 5 and 6 and so on. Bring the spokes down over the outside and finish by locking.

BASKETS WITHOUT MOLDS.

1. Work basket. Sixteen thirty-inch (No. 3) spokes. No. 2 weavers. Indian center. Keep the spokes in pairs. Japanese weave. After a four and one-half inch base, triple twist once with No. 3 reed. Make the basket five inches in height, having first half an outward flare and second half an inward flare. Between the flares, triple twist once with No. 3. At the top go behind one, in front of one and in, pushing the pairs of spokes down hard to make a perfectly flat horizontal border.

2. Candy basket with high twisted handle. Eight spokes No. 2. 15½ inches long. No. 1 weaver. Indian center. Japanese weave until base is 2½ inches in width and turn up quite abruptly. Triple twist once with No. 2. Pair 1½ inches. Wet the spokes and turn outward abruptly. Cut

two pieces of No. 3 for a handle as long as desired. Insert one each side of a spoke, wet and twist them fairly tight. Insert the ends on opposite side of the basket. Weave all the turned down spokes until you get a one-inch flare, using the handle ends and the spokes between as one spoke. Add an open border.

3. Bonbon basket. As above, omitting handle. When ready for border, wet the spokes well and pull each back separately. Then stick each one through so that it comes out on the inside of the basket at the point where the one inch flare began. With these ends of spokes make a shelf by going across one and in, trying to get a flat effect. Make a mat cover to fit tightly on the shelf.

For a variation from Indian center, hold sixteen spokes in groups of four in a whirling figure, leaving a half-inch hollow square in the middle. Proceed as in Indian center.

OTHER BASKETS WITH WOVEN CENTERS, ETC.

Work basket with cover.

Large round mending basket.

Round work basket shaped like a large collar box, and lined with cretonne or silk.

Work box, lined.

Sewing basket, lined and with bag top.

Silk party bag with reed base.

Flower holder with lower part woven over a tumbler and a lace-work handle.

Hanging flower basket for piazza.

Jardiniere woven with brown and green weavers, and a simple rolled border.

Large marketing basket with heavy durable handle.

Oval sandwich tray with small reed handles.

Round, fairly shallow sandwich basket with a three-cornered handle.

Fruit basket, round or melon-shaped.

Shallow cake basket with high wide handle.

"Lace-work" candy basket.

Low bonbon holder, with handle.

Low nut basket, with handle.

HANDLES.

1. Twelve pieces of No. 1 or No. 2. Slip all through the finished top of a basket, six on each side of a spoke. Make a three-strand braid. When long enough, attach to the opposite side of basket by weaving each piece in and out until it is firm, and the whole resembles the beginning of the handle.

2. Piece of No. 5 of desired length. Sharpen the ends. Insert close to two opposite spokes. Insert eight pieces of No. 1 at one end and make a four-strand braid over the No. 5. Fasten as in 1.

3. Tray handles. Four six-inch pieces No. 5. Sharpen ends. Put two pieces in beside stakes on each side of basket. Insert four pieces of No. 1 and wind handles. Fasten by putting inside of basket, then across a spoke, then in again and cut short.

REFERENCE BOOKS.

- How to make Baskets. By Mary White.
 Practical and Artistic Basketry. By Laura Rollins Tinsley.
 Practical Basket Making. By George Wharton James.
 The Basket Maker. By Luther Weston Turner.
 The Priscilla Basketry Book. By Sallie G. Fitzgerald.

RAFFIA WORK.

MATERIALS.

Raffia (a strong pliable grass) used alone, or together with heavy twine, rope, roving, or reed. Blunt tapestry needles, No. 18 or 19.

SUGGESTIONS.

Twine makes a softer basket than the reed, needs no soaking, and is easier on the hands, requiring less strength in the fingers.

Moisten raffia before use, but do not soak long. It may be used flat or twisted. Slit the strands to the desired fineness. Thread the larger end in the needle.

Raffia comes in many colors. Insist on artistic combinations. Seldom use more than two colors. Exception: three colors,—cream, orange and brown.

When starting a new strand do not tie the ends, but overlap them about one inch and work with them as one. If a knot is necessary, as in making a picture-frame, be sure it is concealed.

Soak the foundation reed till pliable.

When joining the foundation reeds, splice the ends to insure a smooth, even surface.

Raffia baskets may be started in two ways:

1. By using raffia over raffia, making it easier for untrained fingers to mould the basket at the outset.

Method: Take four or five strands of raffia and tie in a hard knot at one end, trimming evenly at knotted end. Now twist this group of strands into a flat spiral figure, and with raffia-threaded needle sew into shape until center of basket resembles a "coiled snake." Continue sewing over this raffia foundation, around and around, until a thin reed can be inserted with ease. Sew over this reed until a thicker reed can be used, changing then to a reed of size desired.

STITCHES.

Lazy squaw stitch. Wind the raffia around the reed closely either two or three times according to fineness of raffia, then sew through below the preceding row of reed. Repeat.

Knot stitch. Wind as above. Sew through. After the sewing stitch pass the raffia around the reed, and back over the stitch just taken to form a knot effect. Repeat.

ARTICLES MADE WITH RAFFIA.

Belt. Braid six or eight strands of harmonious colors. Add raffia tassels.

Horse reins. Knit with toy knitter.

Picture frames. Cardboard foundation, circular, oval or oblong. Wrap or knot closely with raffia. To knot bring the larger end up through the hole, and tie on the wrong side. Put the other end back through the open-

ing and bring it up through the loop formed. Tie on new strands. Keep knots on the wrong side. After the cardboard is filled the edge may be further decorated by a fancy stitch all around. Leave a loop for a hanger. Sew the picture in with raffia or glue it to the frame.

Napkin ring. Pliable cardboard (8 in. by $1\frac{1}{2}$ in.). Sew the ends together with linen thread to form the ring. Knot the raffia strands as in the picture frame.

Needle book. Light weight cardboard. Two $2\frac{1}{2}$ -inch circles with holes in the centers. Cover both with raffia using blanket stitch. Use a needle to pass the raffia through the center of the card. Fasten together with flannel leaves between. These leaves may be finished with even or uneven blanket stitch. Two raffia braids for tying the book, sewed opposite the place of fastening.

Twine-ball bag. Double twenty strands of raffia and tie into a half-inch brass ring. Pin the ring fast to a ball of twine. Tie one strand from one pair to the next strand of the next pair with a plain hard knot. Set pins at regular distances to make the desired size of meshes. When the ball is covered tie all the raffia tightly into a bunch and braid in a three-strand braid. At the end of the braid tie a ribbon of color to match the twine, then double the braid and tie the ribbon in a bow at the top of the ball, thus making a strong loop for hanging. To use the twine, pull from the center of the ball through the ring at the bottom.

Simple sewing bag. Loop eight pieces of raffia over a ring. Tie "Solomon's knots" forming the diamond pattern. Line the bag with silk and make draw strings of braided raffia.

More difficult bag. Using the "Lazy Squaw" stitch make two circles of raffia alike in size and color, for the sides of the bag. For circles 6 or 7 inches in diameter use $\frac{3}{4}$ of a yard of 6-inch ribbon. Hem the ends. Gather both selvage edges (dividing the length and gathering from the middle each way), and sew one edge to each circle. Draw strings of narrow ribbon.

Baskets. "Lazy Squaw" stitch. Keep the base flat, and rows close together. The bowl shape is one of the easiest but much variety of shape is possible. A cover may be made like the base and sewed on with raffia. Introduce color in stripes (the easiest), diamonds or other varied designs. For two colors use two needles and carry one color along with the reed, winding over it when not using it.

Basket with handle. Very flat base of thirty rows. Build up eight or ten rows. Fasten into the sides a handle of pliable reed covered with raffia.

Tumbler coasters. Knot stitch. Flat base $2\frac{1}{2}$ inches in diameter. Build up three rows.

Finger purse. Use eight strands of raffia as a foundation. Using "Lazy Squaw" stitch sew two pieces pocketbook shape (oblongs about 2 in. by 3 in. with rounded corners). Across the one which is to form the back sew a strap formed by buttonholing over several strands of raffia. At the middle of the front piece sew a knob of raffia with a point projecting toward the bottom over which a loop may fasten. Decorate the front by embroidering with another color of raffia an Indian design. Buttonhole the ends and one side of the two pieces together. Along the open side of the back, form, by buttonholing, an open-work flap, with a loop to fasten tightly over the knob on the front.

Small mats, bags, baskets, and hats. Weave on cardboard looms.
(A. B. C.)

Larger Mats. Weave on wooden looms. Warp with raffia.

Small basket with wooden base and long nails for spokes. Weave with raffia.

Brush broom holder. Two circles. "Lazy Squaw" stitch, knot stitch or weaving.

Soft basket sewed of braided raffia.

Hanging basket. Raffia knotted over a bottle. Hang with raffia braids.

Party bag. Tie with hard or macremé knots and line with silk.

Table mat.

Doll's hat. Sewed of raffia braids.

Book mark.

Round work basket with silk top.

Flower basket. Make over a glass bowl.

Round plaque or serving tray.

Fruit bowl with high wide handle.

Rings for the "Ring toss" game. Wind or buttonhole over several strands of reed.

Coat hanger. Knot closely and evenly over a wire coat hanger.

Soles for bedroom slippers.

Bathing sandals.

Sofa pillow or porch pillow.

Porch seat. Circle 12 or 14 inches in diameter. Raffia over very coarse reed or over clothesline.

BIBLIOGRAPHY.

See under Reed.

LEATHER WORK.

INTRODUCTION.

Talk about leather: whence obtained, how prepared, uses.

CAUTION.

Do not attempt tooled leather work with very immature or careless children.

MATERIALS.

Odds and ends of soft leather—remnants.

Sheep ooze of good color, as tan or brown, is most economical to buy in the whole skin.

For tooling—specially prepared cow ooze and Russian calf. The latter is very durable. May be bought by square foot or skin.

Tooling iron (inexpensive) curved on the ends.

A nut pick not too sharp may be used.

Glove fasteners and small set of tools (two pieces) for inserting.

MODELS, PLAIN OR TOOLED.

Penwiper, blotter, bookmark, calendar.

Glasses wiper—chamois or special paper leaves.

Memorandum pad cover—cord and pencil attached.

Shaving pad cover.

Book or magazine cover. Slip over or tie on.

Needlebooks—lined and rolled or folded.

Pencil holder—two pieces joined or one longer doubled. Stitched or laced.

Scissors or knife case—open at one end or with flap and fastener.

Crochet hook case—heart shaped at top, tapering at bottom.

Court plaster case—rectangular or folding.

Card case—double or single pocket, lined or unlined, or beaded.

Shoe polisher—circular sheepskin pocket, or folding with sheepskin pocket and clasp.

Bill folder—simple flap folding in or flaps stitched on.

Bill folder and change purse—piece stitched on for change pocket and flap for fold. Two fasteners.

Square coin purse—good size.

Glove coin purse—circular or rectangular.

Large circular purse—single or double pocket.

Circular coin purse—for finger, with tiny strap on back; for wrist, with strap through slit in back; for belt, with strap through slit in back.

Draw bag for change or thimble—very soft leather. Circular in shape with concave scallops around the edge. On two opposite sides leave projections about one inch in width and in length. Punch edge at each side of these projections and each side of the angles between the scallops. Lace as for bag and draw up. To open, pull projections or “ears.”

Leather bags of different simple styles.

Bootees trimmed with beads.

FORMS.

Choose a form appropriate to the model, as circle, rectangle, heart, leaf, fan, shield, hexagon, bell, triangle, fancy outline (as Dutch figure or teddy bear) for penwiper or needlebook.

METHOD.

Trace forms. Plan with care to avoid waste.

Cut with shears or sharp knife on glass.

For tooling—place cut leather form on glass. Moisten slightly but evenly with damp cloth or sponge.

For plain border—draw with tracing or tooling iron a line parallel to and a short distance from edge.

For double border—draw another line distant from the first the width desired. This border may be left raised. Go over the lines firmly until desired result is obtained. For flat border rub down smoothly with curved surface of iron.

Trace any simple figure—border, conventional design, shamrock, or initial. Tracing paper and clips.

Rub down by firm pressure (moistening as needed) until design is smooth and shining. Leave edges sharply outlined.

If color is desired stain the design with Higgins' indelible ink.

METHODS OF FINISHING.

Letter.

Use flannel or chamois leaves in penwipers, flannel in needlebooks, etc.

Either one or two covers may be used in many cases as on penwipers, shaving pads, etc.

Attach fasteners when needed.

Articles may be sewed, tied, or laced with cord, or strips of leather.

To sew—have pattern, place leather on a piece of wood and pierce holes regularly before sewing. Machine may be used for stitching.

To lace—punch holes. Use a narrow strip of leather and lace flat or over the edges.

BIBLIOGRAPHY.

Book on Leather Work. By Adelaide Mickel. Published by Manual Arts Press, Peoria, Ill.

Leather Work. By Wilcox.

MATERIALS.

Celluloid Button Snap-Fasteners. (To match leather—by dozen.) Fasteners inserted. W. A. Hall, 250 Devonshire Street, Boston, Mass.

Tool Set for Inserting Fasteners. Fasteners by gross. Small Gilt. United States Fastener Co., 1230 Columbia Road, South Boston, Mass.

WOOD WORK.

RULES.

To square to dimensions when stock is of the desired thickness (unless otherwise directed):

1. Statement.—Select better side. Mark I.
 Direction.—If warped, choose the concave side.
 Test (precede with eye test).—With back of try-square.
2. Statement.—Plane better edge. Mark it II.
 Direction.—Plane it smooth, straight and square with marked side.
 Test.—For straightness, with straight edge. For squareness, with try-square in at least three places from marked side only.
3. Statement.—Gage width and plane.
 Direction.—Gage from marked edge on both sides. Saw if necessary, plane to the gage lines, and stop.
 Test.—For flatness, if necessary with back of try-square.
4. Statement.—Square better end.
 Direction.—Squaring from marked surfaces only, score a knife line around near end. Plane to the line and stop.
 Test.—For flatness, if necessary with back of try-square. For squareness, try-square from marked surface only.
5. Statement.—Lay off length and square the other end.
 Direction.—Lay off from finished end. Score knife line around, squaring from marked surface only. Saw close to outside of line. Plane to the line and stop.
 Test.—For flatness, if necessary with back of try-square. For squareness, with try-square from marked surface only.
1. Drive brads into wood to form child's name, also to form alphabet.
2. Suggested models are:
 Match scratchers. (Sandpaper block 4" x 2" x $\frac{1}{2}$ ". Have $\frac{1}{2}$ " hole $\frac{1}{2}$ " from top.)
 Plant label (8" x $1\frac{1}{2}$ " x $\frac{1}{2}$ ").
 Clappers. (Any fairly hard wood. 6" x 1" x $\frac{1}{4}$ ").
 Pencil sharpener (6" x $1\frac{1}{2}$ " x $\frac{1}{4}$ ". Sandpaper 4" x $1\frac{1}{2}$ ").
3. Laundry stick (24" x $1\frac{1}{4}$ " x $\frac{5}{8}$ ").
 Shrub label (17" x $1\frac{1}{2}$ " x $\frac{5}{8}$ ").
 Clothes-line winder (8" x 4" x $\frac{3}{4}$ ").
 Shelves.
 Door stop (7" x $1\frac{1}{2}$ " x $1\frac{1}{2}$ ").
 Toothbrush rack.
 Coat and trousers hangers, broom holders, kitchen racks, tray and basket bases (square, round and elliptical). Sconce, shoe rack.
4. Slat models, such as: Trellises, flowerpot stands, footstools, doormats, loom.
5. Boards of different kinds:
 Swing board (13" x $5\frac{1}{2}$ " x $\frac{5}{8}$ ").
 Peg board. (Outlines of animals on board. Use automatic drill.)

Meat board (elliptical, $14\frac{1}{2}'' \times 8\frac{1}{2}''$).

Cake board ($12'' \times 6''$).

Order board ($9\frac{1}{2}'' \times 5\frac{1}{2}'' \times \frac{3}{8}''$).

Elliptical bread board ($11\frac{1}{2}'' \times 8\frac{1}{2}''$).

Round bread board ($10'' \times \frac{1}{2}''$).

Number board for United States money (made of a barrel head.

Draw on head a large star; at each point put in a small hook and beside it write different denominations of United States money).

6. Boxes:

For colors ($9\frac{1}{2}'' \times 6'' \times 6\frac{1}{2}''$).

For cards ($7'' \times 4'' \times 4\frac{1}{2}''$).

For balls ($12'' \times 5\frac{1}{2}'' \times 4\frac{1}{4}''$).

7. Toys:

Simple toys, such as: guns, swords, and daggers.

Coping-saw work (beaver-board, three ply wood, cigar boxes).

Animals:

Simple animals.

Animals on platforms with wheels.

Assembled animals.

RULES.

To square to dimensions when stock is not of the desired thickness. (Unless Otherwise Directed):

1. Statement.—Plane better side. Mark it I.

Direction (examine stock for size and soundness): If warped, observe grain and plane convex side, smooth and flat. On thin, warped pieces it will be found advisable to observe grain and first plane concave side near enough flat to rest firmly on bench. Then again observe grain and plane convex side as above.

Test.—For flatness, with back of try-square, straight edge and winding sticks.

2. Statement.—Plane better edge. Mark it II.

Direction.—Observe grain and plane edge smooth, straight and square with marked side.

Test.—For straightness, with straight edge. For squareness, with try-square in at least three places, testing from marked side.

3. Statement.—Gage width and plane.

Direction.—Gage from marked edge on both sides. Observe grain, saw if necessary and plane to the lines.

Test.—For flatness, if necessary with back of try-square.

4. Statement.—Gage thickness and plane.

Direction.—Gage from marked side on both edges (and on ends if necessary). Observe grain and plane to the gage lines.

Test.—For flatness, with back of try-square.

5. Statement.—Square better end.

Direction.—Score knife line around near end, squaring from marked surfaces only. Saw close to outside of line and plane to the line.

Test.—For flatness, if necessary with back of try-square. For squareness, with try-square from marked surfaces only.

6. Statement.—Lay off length and square the other end.

Direction.—Lay off from finished end, score knife line around, squar-

ing from marked surfaces only. Saw close to outside of line, and plane to the line.

Test.—For flatness, if necessary with back of try-square. For squareness, with try-square from marked surfaces only.

1. Suggested models:

Hat rack ($18'' \times 2\frac{1}{2}'' \times \frac{3}{4}''$).

Key board ($15'' \times 2'' \times \frac{1}{2}''$).

Towel rack, sleeve board (with or without standards), blotters, lap boards (a flat piece of white wood curved to fit child. Use $\frac{1}{2}''$ wood.

2. Boxes for various purposes:

Knife, fork and spoon box. ($14\frac{1}{2}'' \times 9'' \times 2\frac{3}{8}''$. $\frac{3}{8}''$ stock except ends which are $\frac{7}{8}''$. Sides $2\frac{1}{2}''$ high, center $10\frac{3}{4}''$ long.)

Match box or toothpick holders, stationery holders, scholar's companion.

3. Window ventilators.

4. Simple pieces of furniture:

Stools, ottomans, taborets, magazine stands, campstools, bookrack, bean bag board, kitchen rack.

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Match Box. Industrial Arts Magazine, Dec., 1918.

COBBLING.

MATERIALS.

1. A supply of medium weight sole leather. Order by pound. (About 1 pound to square foot.)
2. Nails. Improved iron cobblers' nails $\frac{5}{8}$ inch for soles and $\frac{3}{4}$ inch for heels.
3. Very sharp thin knife.
4. Iron standard with three or more lasts of different sizes.
5. Hammer—ordinary one will do.
6. After the children gain some skill, burnishing fluid and burnishing iron may be added.

LESSON I.

1. Choose boot with hole in sole (not on edge).
2. Cut piece of sole leather with diameter about one inch greater than hole.
3. Bevel leather on wrong side to a thin edge and with awl mark for nails. (About $\frac{1}{2}$ inch from edge and $\frac{1}{2}$ inch apart.)
4. Nail in position.

LESSON II.

Choose shoe with hole extending to edge of sole. Proceed as before but do not bevel the edge of patch which is to come on edge of sole.

LESSON III. HALF SOLES.

Prepare shoe. With scoring awl or screwdriver and strong pinchers tear off to the shank the outer sole, leaving the inner one to which the top is sewed. Shave thin the part of sole left in shank to which the new sole is to be attached.

Make pattern and cut the leather slightly larger. Bevel the edge on wrong side. (At the shank only.)

Soak leather in hot water till pliable. Hammer the middle surface to make it slightly cup-shaped. Nail to shoe with two nails, one at toe and one at shank.

Make path for nails and with awl (pointing slightly toward the center of shoe) make holes in which to plant the nails.

Nails to be placed about $\frac{1}{2}$ inch apart, beginning at shank.

Trim, file and sandpaper edge.

Use burnishing fluid and hot burnishing iron.

BRUSH MAKING.

A brush is an implement composed of a solid back or base, in which are set bristles or fibres. These bristles or fibres are fastened in the back by means of wire or cement. The best method is to fasten by means of wire. The wire is concealed by a piece of wood which is glued over it.

The best bristles come from Russia, China and France. They are very expensive and are not used in cheap brushes. America also produces bristles. They are very short, fine and flexible. They are used for paint brushes and are the cheapest bristles on the market.

Fibres, made to imitate bristles, are used in cheap brushes. These fibres are Palmyra, Tampico and Palmetto. Tampico comes from the leaves and stems of the century plant. Palmyra comes from Africa and Palmetto from South America. They are made from decayed matter from trees.

The United States has some fifteen hundred establishments for the making of brushes. Brushes are used for a great variety of purposes, such as scrubbing, dusting, smoothing, polishing and laying on of color, or coating a surface as with varnish, paint or whitewash. These brushes are made in many shapes. The directions which follow are for shoe brushes, scrub and hand brushes.

MATERIALS.

Wood, copper or steel wire, screws, white Tampico for hair brushes, Tampico with horsehair for shoe brushes, Palmyra for scrub brushes.

Wire, Tampico and Palmyra are sold by the pound.

Parts of a brush: Top, brush back, bristles.

METHOD OF WORK.

Brush backs. Choose and fashion shape desired, using soft wood for hairbrushes and hard wood for scrub brushes.

Mark wood for holes. The holes should be staggered.¹ Bore holes with a German or Reamer bit, using a wooden stop² (which the children can make) on the bit. With a backsaw, make on the back of the brush back, grooves connecting each line of holes, just deep enough to allow the wire to be flush with the surface of the wood. Sandpaper the brush back.

Drawing in of brush. Wind enough wire for brush around a small piece of dowel. Place the dowel in a vise to remain there until the work is finished. In working, keep the brush back free to hold in the hand, as by pulling the brush back away from the dowel the wire will tighten.

Make a free loop with end of wire. Slip this loop through the end hole

¹ Staggered—alternate.

² How to make a stop. Place bit in the bit stock. Measure the length of bit protruding from the stock. Find thickness of piece of wood used for brush back. Subtract the thickness of wood, in inches, from the length of bit, in inches. Saw a piece of $\frac{3}{4}$ or $\frac{1}{2}$ inch wood to the length found, making about $\frac{1}{2}$ inch wide. Bore a hole down through the length of wood with the bit. The bit should extend beyond this piece of wood, just a little less than the thickness of the piece of wood to be used for the brush back, so that the point, only, will penetrate through, making a tapering hole.

in the center row; starting from the groove side of brush back. Place a sufficient quantity of hair in the loop of wire. With the brush back in hand, pull the loop containing the hair, until the hair slips, doubled, into the hole. This being the first hole used, the wire must be fastened on the back by twisting the small free end of wire several times around the main wire. Make a new loop in wire at next hole. Slip the loop through the hole, being careful that wire is pulled tight into groove on back of brush. Place in this loop a similar quantity of hairs and pull until hair slips into hole. Repeat process throughout center row. (As each row is finished cut hairs the length desired.) Cross into next row and continue filling the rows with hair until one half of brush is finished. Then cross to first row on other side of center (cut a groove across, to hold wire) and continue work until brush is finished. Fasten the last loop of wire by twisting the end of wire several times around main stretch of wire. If wire breaks at any time, fasten as if brush were finished and start again as when first beginning.

Making top of brush. Trace around finished brush back for pattern for top (as children's work has probably varied from the original pattern). Use $\frac{3}{8}$ -inch wood. Cut out top—mark and countersink for screws. Glue top to back. Place in clamps until glue hardens (overnight). Fasten with screws. Sandpaper and shellac finished brush.

Shoe brushes. In making a shoe brush proceed as above for main part of brush, and fasten on the top of brush. Then make a dauber in same manner, but without a top, and fasten to the front of brush with glue and screws, or nails. Make a handle and fasten to body of brush with screws.

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SEWING.

LOW GRADE CHILDREN.

1. Kindergarten sewing cards. Child may make his own cards, punching the holes with any large needle. Sew with bright worsteds.
2. Cross-stitch on $\frac{1}{4}$ -inch or $\frac{1}{2}$ -inch check gingham. Diagonals of the dark blocks is the easiest stitch. Diagonals of all blocks. Diagonals and diameters of each block make a more complicated pattern. Use Dexter cotton for first work. Colored silkateens are pretty for more complicated patterns. Teach neatness of the wrong side of the work.
3. Sew on buttons starting with two-hole.
4. Pincushion. Cut rectangle 4 by 8 inches. Double. Sew on two sides. Stuff with woolen rags. Sew up last side.
5. Squares for pillow or quilt. Six-inch squares of unbleached cotton cloth. Draw designs on the squares. Outline in color. Piece together.
6. Baby's bib. Oblong piece of material. Cut out curve for neck. Hem all around. Outline in color some simple picture or design at the bottom. Tapes at neck.
7. Bed socks. Stocking foot for pattern. Cut from outing flannel.

MIDDLE GRADE.

1. Teach fundamental stitches as needed, on a strip of muslin, using colored thread.
2. Teach hemming of doll's sheets and pillowcases. Explain that full-width sheeting has selvage on both edges.
3. Make doll's pillow.
4. Hem dish towels, dusters and simple tea aprons.
5. Make a bag. Hem side opposite selvage. Sew up the two sides overhand stitch. Allow spaces for tapes. Insert tapes to draw up from opposite sides. Decorate with cross-stitch.
6. Dust caps. Twenty-seven-inch circle of gingham or muslin. Face with bias seam tape and insert elastic.
7. Kitchen aprons.
8. Simple bloomers.
9. Teach button hole stitch with raffia on brass curtain rings.
10. Rings for ring toss. Buttonhole with roving over three or four heavy reeds. Reeds should be bound tightly into a ring before beginning.
11. Straight, gathered petticoat of outing flannel or long cloth.
12. Towels. Huckaback. Hem and work patterns through the raised stitches with colored thread. Following a simple diagonal is easiest at first. Later, vertical and horizontal lines to form Grecian border patterns may be successful.
13. Table covers. Fringe a piece of burlap on four sides. Overcast. Cross stitch border in colors. Table runners may be made in same way.
14. Teach catch, chain, feather, outline and blanket stitches. Use as a decoration for underwear.

15. Quilts of patchwork—light and dark pieces. Finish by feather stitching.
16. Teach sewing on of hooks and eyes, snap fasteners.
17. Hemstitching on burlap or very coarse linen.

HIGH GRADE.

1. Fine hemstitching.
2. Hem damask napkins and tablecloth.
3. Darn tears.
4. Darn stockings.
5. Cut, baste, make and trim, combinations, envelopes, camisoles, nightdresses.
6. Patch striped, plaid, plain materials.
7. Ruffles set upon skirt finished by bias seam tapes.
8. Cutting and making of blouses, skirts, dresses. Patterns obtained from style book.

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 The Sewing Book. Annie L. Jessup.
 Progressive Lessons in Needlework. Catherine F. Johnson.
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MILLINERY.

I. TOOLS.

Pliers—for cutting and bending wire.

Scissors—long narrow blades.

Needles—millinery No. 5-10 for making, millinery No. 3-4 for trimming.

Thread—Kerr's lustre, D for making, A for fine work in place of silk.

Pins—No. 3 slender steel.

II. FRAMES.

Types—mushroom, flat sailor, turban. All others are modifications of these three types.

Materials—buckram and French willow for hats of piece material, rice net for straw and ribbon hats.

III. STITCHES.

Wire stitch—to fasten wire to any material.

Millinery backstitch—used largely for foundation work where strength is required.

Slip stitch—a small stitch concealed in folded edges which it joins.

Hemming—used in foundation work to hold an unfinished edge flat to frame.

Millinery catch stitch, an invisible stitch. Used for fastening a flat hem and for making folds.

Running—for gathering and hand tucking.

IV. FITTED COVERS OF PIECE MATERIALS.

Mushroom brim—upper cover. Nap runs from head size to edge of brim. Cut center front on bias so nap will be diagonal. Pin carefully. Be very careful in velvet about placing pins and leaving them in. Pin first on one side of center front, and then on the other, stitching material across and around. Pin headsize as you go along. Having completed circumference, pin together at center back. Be sure to get straight seam line directly over center back. Allowance for seam $\frac{3}{8}$ " for firm material, $\frac{1}{2}$ " for others. Slip stitch seam. Trade workrooms use millinery glue to fasten edge of upper brim covering. Hemming stitch may be used instead of paste.

Under cover. Place center front on bias with the nap, running from the headsize to edge. Stretch and pin the same as in the upper cover, being careful not to stretch material away from frame. Close seam as in upper cover. Pin very carefully so edges exactly meet. Turn a little below required edge. There is stretch enough in material to bring it to required line. When pinned, slip stitch the two edges together. Fasten at headsize $\frac{1}{2}$ " above headsize line with millinery backstitch.

Flat sailor—upper cover. Place bias at center front. Pin. Draw material back smoothly and pin at center back. Begin cutting headsize line at center. Cut on diameter from headsize to center. Cut out part

away from center. Fit headsize line first. Cut to collar or grain beyond until material fits down easily. Pin circumference edge, beginning with center front. Put pins 2" or 3" apart, then fill in when necessary. Under cover fitted same as mushroom, but without seam.

Crown. Nap of side crown must correspond with brim. Draw pattern of crown tip, allowing seam. Place bias at center front, cut by paper pattern, nap running toward center back. Pin tip and side crown together at center front, center back, and sides. Backstitch. Slip velvet crown over crown of frame—turn $\frac{1}{2}$ " inside and hem. Fit crown to brim. Slip stitch around crown, coming through frame at center back, front and sides. Trim hat and line. French linings are slip stitched into hat. Standard linings are wire stitched.

V. EDGE FINISHES.

Slip stitch edges together.

Wire at edge of covers.

1. Wire fitted just below edge in under cover. Used on drooping models or turbans.

2. Wire in under cover fitted beyond edge of brim. Effect of piping. Used on sailor or slight variations.

3. Snap binding—used largely on transparent brims.

VI. FITTED UPPER COVER OF STRAW—UNDER COVER PIECE MATERIAL.

Brim. Allow edge of straw braid to extend beyond edge of brim, and pin. Cut off, leaving a generous amount for seam. Sew second row directly in line with circumference wire and complete sewing. Braid is sewed at upper edge lapping $\frac{1}{8}$ " to $\frac{1}{4}$ ". Put on under cover, fastening over edge of upper brim and slip stitch edge of braid on under side.

Crown. Edge of crown is bound with braid or silk. Start straw at center back turning first row under. Sew row after row, outer edge down, and sew on the lower edge. Lap rows more at center of tip. When center is reached wind end of straw and turn under. Press.

VII. HANDMADE FLOWERS.

Many delightful flowers may be made of scraps of soft piece materials, wool and chenille.

Wild rose. Cut five $1\frac{1}{4}$ " squares. Fold through center. Fold diagonally. Gather raw edges. Attach petals. Make center of French knots, or use ready-made center. Leaves are folded same way, flat side up. Gather.

Rosebud. Satin cut on straight of material $4\frac{1}{2}$ " x 1". Make a small loop in end of spool wire. Fold satin lengthwise through the center, fastening over loop of spool wire. Gather long edge loosely and wind about wire. Fasten firmly. Sew up open end of satin. Wind stem with wool or chenille. Rubber stemming may be used.

KNITTING.

TOY KNITTING.

- (a) Necklace of Dexter cotton No. 6 or coarser. Ten-inch piece tied together with 4-inch piece sewed into circle or oval for pendant.
- (b) Mats. Colored Germantown sewed into circle of any size.
- (c) Reins of colored carpet warp.
- (d) Hot plate mats of Dexter cotton No. 6 or coarser. Make 3-inch circle; around this attach rows of smaller circles until it is large enough.

SIMPLE KNITTING.

Teach plain knitting on medium-sized short needles. Meat skewers sandpapered, shellacked, with a sealing wax knob, make good beginning needles.

1. Reins of colored Germantown. Cast on 8 stitches. Knit desired length. Knit 10-inch strip for breast piece and sew on it 3 bells.

2. Face cloth. No. 8 needles, No. 5 Dexter cotton. Colored border gives variety. Knit 10-inch square. Crochet shell edge; 5 d. c., skip 1, 1 s. c., skip 1, repeat.

3. Guest towel. Cast on 60 to 75 stitches, and knit in pattern to match face cloth.

4. Bath towel. Cast on 100 stitches, and knit in pattern to match face cloth.

5. Wash glove—good for baby's bath. No. 5 Dexter cotton. Knit rectangle 10 inches by 8 inches. Fold and sew to make bag 5 inches by 8 inches.

Older pupils can pick up stitches on three needles and knit a purled wrist.

6. Neck piece for winter. Medium needles. Germantown. Cast on 25 stitches. Knit rectangle 18 inches long. Sew on a pearl button. Crochet a chain and attach for buttonhole.

7. Winter scarf of Germantown. Cast on 25 to 30 stitches. Knit 1 yard. Colored borders give opportunity for great variety and relieve monotony. Add fringe, also pockets or a belt.

A thread or two of silkateen of a contrasting color works in well with the wool for decorative borders.

8. Baby's ball of colored Germantown. Knit rectangle 5 inches by 8 inches. Sew 5-inch ends together. Fill with cotton wrapped around a sleigh bell. Gather both ends tightly and sew firmly.

9. Boy's cap. No. 7 needles. Scotch yarn. Cast on 40 to 50 stitches. Knit 60 ribs. Sew ends together. Fold up $1\frac{1}{2}$ to 2 inches, on one side, for border. Sew other side together very tightly and add close tassel. If two colors are used, cast on 30 to 40 stitches and proceed as before. Knit 2-inch strip large enough to sew around and turn up as border.

10. Afghan. Seven-inch squares sewed together in pleasing combination.

11. Bedroom slippers of Germantown. Knit $2\frac{1}{2}$ -inch strip until the length plus the width is the distance around a lamb's wool sole. Sew width to beginning of length. Knit 1-inch strip a little shorter than the distance around the top. Stretch and sew to top of slipper, then sew lower edge to slipper and put in an elastic.

12. Doll's sweater of Germantown. Cast on 24 stitches. Knit desired length for back and roll at bottom. Add 18 stitches for one sleeve. Knit across and add 18 stitches for other sleeve. When sleeve is half wide enough knit 24, bind off 12 for neck, knit 24. Next row, knit 24, cast on 12, knit 24. Knit second half of sleeve. Cast off 18 stitches at each end and continue until back is same length as front. Sew up under arm and sleeve.

13. Bathroom rug. Very large wooden or bone needles. Three-fourths inch strips of outing flannel. Knit plain. Three-fourths by 1 yard is a practical size.

14. Round rug may be made of the above material, enlarging upon directions for round penwiper.

15. Pincushion. Cast on 30 stitches. Knit 20, turn. Knit 10, turn. Knit 10, turn. Knit 12, turn. Continue thus until all stitches have been knit. Change color.

16. Penwiper. Single Germantown. No. 16 needles. Cast on 15 or 18 stitches. Knit 3, and back. Knit 6, and back. Knit 9, and back. Knit 12, and back. Knit row, and seam back. This makes one gore.

17. Baby's mittens, knitted on two needles. No. 12 steel needles. Cast on 36 stitches. Knit 2, pearl 2; repeat across and continue ribbing for $1\frac{1}{2}$ inches. Next row—(knit 2, over, narrow) 9 times; knit back plain. Knit 3 ridges (6 rows) plain. Knit 17, increase 1 stitch in each of next 2 stitches by knitting first the front and then the back of the stitch, knit 17; knit back plain. Knit 17, increase 1, knit 2, increase 1, knit 17; knit back plain. Knit 17, increase 1, knit 4, increase 1, knit 17; knit back plain. Continue, knitting 2 more stitches each time between increases, until there are 48 stitches on the needle, then one row without increase. Knit 31, turn, knit back and forth on 14 stitches for thumb for 11 rows, then narrow every 2 stitches for 2 rows. Break off length of wool, thread through the remaining stitches and sew up thumb. Join wool again to ball, and, beginning with the needle containing the 17 knitted stitches, knit 2 stitches at side of thumb and work across other needle. Knit 40 rows (20 ribs) from wrist, then, to shape top: First row—knit 4, narrow; repeat across; knit back plain. Third row—knit 3, narrow; repeat across; knit back plain. Fifth row—knit 2, narrow; repeat across; knit back plain. Seventh row—knit 1, narrow; repeat across; knit back plain. Finish like top of thumb, sew up seam and run ribbon through holes at the wrist.

Thumbless mittens for an infant may be made from the above directions by omitting the widening for thumb and the thumb stitches.

18. Mittens for a well-grown child may be made by casting on 72 stitches, and doubling the directions for baby mittens.

19. Teapot cozy in blocks. Two steel needles No. 16. Two colors of fourfold Germantown. Cast on 45 stitches with the dark color. Knit 10 ribs (20 rows) plain. Knit 10 stitches with the dark color, 5 with the light, 5 with dark, 5 with light, 5 with dark, 5 with light, 10 dark. Next row the same. Keep threads on wrong side, so that all long threads will come on

the same side of the work. Continue until there are 5 ribs. When changing colors, bring the new thread up under the old one. Next row—knit 15 dark, 5 light, 5 dark, 5 light, 5 dark until there are 5 ribs. Change colors. Repeat until there are 5 rows of blocks. Ten ribs plain with the dark color. Crochet an edge with light color. Join outer corners of outside blocks on the wrong side with chains of 7 or 8 stitches.

20. Sweater for an eleven-year-old. Cast on 72 stitches. Knit 2, purl 2 for 3 inches. Knit plain for 15 more inches. Knit 24 stitches. Cast off 24 stitches. Knit 24 stitches. Put 24 of these stitches on a safety pin. With the other 24 stitches, knit 4 ribs. Do the same for the other shoulder. Cast on 12 stitches on the neck ends of each side and knit for 20 ribs. Join and knit as many inches as are required to match the back.

For sleeve, cast on 30 stitches. Knit 2, purl 2 for 2½ inches. Knit as long as the child's arm.

21. Leggings for a six-year-old. Cast on 78 stitches. Knit 2, purl 2 for 6 inches. Knit plain for 22 rows. Knit 7 rows plain except for narrowing by knitting two stitches as one, just after the first and before the last stitch in each row. Knit 14 rows plain. Knit 2, purl 2 for 8 inches. Duplicate the above. Sew halves together. Strap of elastic sewed under the foot part. Run cord in top.

22. Purred cap. Cast on 96 stitches (32 on each of 3 needles). Knit 2, purl 2 for 35 rows. Knit 6 and purl 2 for 22 rows. Narrow at second stitch on each end of needle until 4 stitches remain on each needle. Thread end of wool into large-eyed needle. Buttonhole around the 8 stitches left, leaving a small opening on top of cap.

An accurate way to estimate size of an article is to knit a small square sampler with the required needles and yarn. Count the number of stitches to the inch in both length and width.

Finished work is about one-third wider than it appears when the stitches are cast on.

Bright children can be taught to purl and so make almost anything that can be knit.

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Clark's ONT Wool-Saver Knitting and Crochet Book No. 4. Men's knitted articles.

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CROCHETING.

Crocheting is far more difficult than knitting. Children enjoy finger crocheting and get the idea of hooking the thread through the loop, but the change to a hook is usually very hard.

At first the teacher may manage the difficult tension with her own left hand while the pupil struggles with the new position of the right hand. Then the child may work with the left hand while the teacher works with the right. After this practice there is little difficulty for the child in working with both hands.

Teach chain, single and double crochet stitch, with large bone hook and bright colored Germantown or macramé cord. First chains may be used as cords for dolls' muffs and for bags.

Afghan stitch is helpful for dull children. At first, teacher may take up all the stitches and child take them off.

Filet patterns are invaluable:

- a. There is great progression of difficulty.
- b. Inaccuracies show and cannot be covered.
- c. Children can make first patterns for themselves on squared paper.
- d. Certain "always" must be mastered:
 1. Always use d. c. stitch.
 2. Always chain 5 to turn.
 3. Always chain 2, skip 2, for open space.
 4. Always make stitch in exact top of stitch in row below.
 5. Closed meshes are always multiples of 3 plus 1.

GERMANTOWN.

Dolls' clothes—Tam-o-shanter, sleeveless jacket, muff, petticoat, sweater, scarf. Chain the desired width; first row, ch. 1, d. c. in 2nd stitch, ch. 1, d. c. in 2nd stitch, repeat for 2nd and all other rows. Ch. 2, d. c. in opening, etc.

JUTE.

Jump rope. With double thread make chain of desired length; make large knots at the ends.

CARPET WARP.

Book bags. Large rectangle of d. c. folded and edges crocheted together to form edges of bag. Handles, ch. long enough for handle, s. c. to desired width.

Pocketbook bags of the prevailing style. Rows of s. c. and d. c. make pleasing effect.

Rugs. One and one-half-inch to two-inch strips of cotton crocheted with very large wooden hook make serviceable rugs.

DEXTER COTTON, CROCHET COTTON, THREAD.

Lingerie cord. Ch. 3, one-half of s. c. in 2nd stitches. Pull next thread through both loops left on needle. Put hook in left hand loop just slipped

from needle and make one-half s. c. Pull next thread through loops. Make desired length.

Round hot plate mats. Useful in learning to widen so as to keep flat. Shell edge of 5 d. c., skip 1, 1 s. c., skip 1, repeat.

Tie. Ch. 8, s. c. in 7th chain and all the way across for all the rows, until tie is long enough. Finish with tassels made of the thread. Buttonhole over ivory ring for a slide.

Skirt hanger. Make 17 s. c. over ivory ring. Turn thread over needle, pull a loop through 1st stitch, thread over needle and pull through all three loops at once. Repeat in every stitch for 24 rows, then crochet the same over safety pin. Be sure to have open end of pin at bottom.

Roses. Made of Germantown to trim hats or of thread to finish lingerie tape or trim dresses. Ch. 5, join. Ch. 4, d. c. in ring, ch. 3, d. c. in ring. Repeat until there are 6 spaces. Fill each space with 1 s. c., 5 d. c., 1 s. c. Ch. 3, fasten through back of 3rd d. c. Repeat all the way around. Fill each space with 1 s. c., 6 d. c., 1 s. c.

Lingerie clasps. Ch. 44, turn. Thread over needle 3 times. Put needle into 3rd chain and pull thread through all 4 loops. Ch. 2. Do this in every 3rd stitch with 2 ch. to turn. Make 3 rows. For the last row ch. 2, s. c. in space, ch. 2, s. c. in space to the end of row. Sew on small snap fasteners at ends and add a rose.

Napkin ring. Make of plain or designed filet. Simple scallop for edge. Finish with snap fasteners. A crocheted or ribbon rose adds to its attractiveness.

Bedroom slippers. Bone crochet hook, Germantown, and a pair of soles. Alternating colors may be used. Take up all stitches on the single back thread to form ribs. Chain 10. One single in each of 9 stitches. Second row—ch. 1. One single in each stitch until center is reached. Three singles in center stitch. One single in each of the remaining stitches. This forms a rib. Continue making 14 ribs for the vamp. To make the side of the slipper—1 single in each of the first 14 stitches. Twenty eight ribs around slipper. Join on wrong side and finish with a scalloped edge. Run elastic around the top.

Baby socks. Germantown. Ch. 36. Turn. Skip 1. One s. c. in each stitch. All stitches are taken up on the back thread to form a rib. Make 6 ribs. To form ankle—1 single in the first 15 stitches. Continue until 14 ribs are made. Join on the inside. To make bottom of foot—1 single in each stitch all around twice. Third row of foot—skip 1 stitch at each corner of the toe each time around for 7 rows. Join on the wrong side, center of the foot. Finish with scalloped top and ribbon.

Roman stripe bag. Ch. 5, join. Eight singles in the ring. Make entire bag of rows of singles, adding or skipping stitches as widening or narrowing is desired for shaping. Various colored silkateens worked in stripes of varying widths give pleasing results. Odds and ends of silkateens may be used for "hit or miss" pattern. A tassel at the bottom and a draw string at the top finish the bag.

Watch or powder-puff case. Colored silkateen. Crochet 2 separate disks, 2½ or 3 inches in diameter, using plain chain stitches. Join disks to form a bag, leaving opening at the top to be finished with shell edge. Line with silk and embroider spray on face of case in French knots.

SIMPLE EDGES.

Plain filet edge. Ch. 17. Turn. Double crochet in 7th stitch from hook. Ch. 2, double in the third. Repeat until there are 4 holes. Ch. 5 and turn. Make lace of the desired length. Add any simple shell edge.

Mile a minute lace. Ch. 7, join, ch. 3, turn in loop, ch. 3, turn in loop, ch. 3, turn in loop, ch. 3, turn in loop, ch. 5, turn. Turn in 2nd space, ch. 3, turn in same space. Repeat until there are 4 turns. Ch. 5, turn and repeat ad. lib.

Pyramid edge. Ch. 10, join, make 10 s. c. in loop. Ch. 10, join to last s. c. Make 5 s. c. in loop, ch. 5, join to middle of 1st loop, 10 s. c. in loop, 5 s. c. in 2nd loop. Repeat from beginning.

PRINTING.

Printing as a trade or as an art is far too difficult for the average Special Class boy. However, printing, with all the processes involved, offers an opportunity of real educational, occupational and social value, especially to the higher grade boys of fifteen or sixteen. Besides interesting this particular group, some of the processes are well adapted to sense training for the lower grade boys. In fact the processes involved, printing, setting up and distribution of type and the sorting of spaces, leads and furniture require such varying degrees of intelligence and skill that they give opportunity for entire class activity.

MATERIALS, MINIMUM AMOUNT.

Small hand press, one font of twelve or fourteen point type, one font of spaces the same size, one composing stick, two or three pounds of leads (assorted sizes), one small box of furniture, benzine, a can of printer's ink and a pair of quoins.

TECHNIC.

Training in the technic of printing is most advisable. However, where such training is impossible either of the books in the bibliography given below covers the basic requirements.

SUGGESTIONS FOR CORRELATION WITH OTHER SUBJECTS.

Arithmetic. Much raw mathematical material is available. Problems may be given to estimate the cost and profit in a given job or to calculate the number of sheets of paper necessary to cut cards to a given size. Learning the spaces may be made a problem in fractions and the necessity for accurate measuring is a valuable exercise.

Language. The conscious attention to form and punctuation in type-setting leads to close observation of printed forms and results in greater accuracy. Short studied dictation may be reproduced in type. Capitalization, indentation and punctuation may be emphasized practically. Proof reading by the class is a valuable exercise in both spelling and language.

Drawing. Printing problems are art problems. Proportion and balance may be taught in very simple composition. Designs and letters may be cut in leather or cork, then mounted and printed.

Geography, industrial and agricultural. Studies in vegetable materials and the manufacture of paper. History of printing, materials used, clay, stone, wax, papyrus, parchment, vellum, paper.

SUGGESTIONS FOR PRINTED MATERIAL.

Printing done in school should be dominated by the social, not the commercial motive. The Special Class boy, with his anti-social tendencies, needs to be trained to work together for a common good, and printing offers just this opportunity. The following are a few suggestions with this

aim in view. Spelling cards, arithmetic score cards, school stationery and record cards, games, valentines, holiday and gift cards (cuts may be bought at any type company), language cards, mottoes, poems and class songs.

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NOTE.

Macremé Work, Hammockmaking and Cement Work are valuable forms of hand work which have been successfully used in many Special Classes.

PROGRAMS.

No one program can serve as a model for all classes.

Groups doing departmental work need a program more carefully made and more strictly followed than single classes.

Older pupils can bear long periods for manual work.

Older and brighter pupils can continue academic work for longer periods than younger and duller ones.

Young and less intelligent pupils need short periods interspersed with physical exercise, manual training, games or singing.

In a class where the range of ages is wide, an older group may study during two recitations of a younger group.

Ample allowance should be made in all programs for general exercises, story-telling and games.

In making a program, decide on the proportion of time to be given to the different subjects according to the needs of the class. Fit the studies into the day's program and as far as possible have the days alike. Regularity makes for seriousness.

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